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# McGraw Hill Texas Math 6-8 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 6	100%	100%	100%	100%
Grade 7	100%	100%	100%	100%
Grade 8	100%	100%	100%	100%

## Section 2. Concept Development and Rigor

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

## Section 3. Integration of Process Skills

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

## **Section 4. Progress Monitoring**

- Materials include developmentally appropriate diagnostic tools and guidance for teachers and students to monitor progress.
- Guidance is provided for teachers and administrators to analyze and respond to data for planning further instruction.
- Materials include frequent, integrated formative assessment opportunities and routine progress monitoring opportunities.

## **Section 5. Supports for All Learners**

- Materials include guidance, scaffolds, supports, and extensions that maximize student learning potential; targeted instruction and activities are provided for students who struggle with content mastery.
- Instructional methods appeal to a variety of learning interests and needs.
- Materials include 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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**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

Throughout the lessons, the materials concentrate on the development of the primary focal areas for the grade-level as outlined in the TEKS. In addition, materials strategically and systematically develop this content knowledge through appropriate practice opportunities, ensuring students achieve proficiency.

Evidence includes but is not limited to:

The online materials contain resources that clearly state the focal areas of a unit, and those focal areas align with the grade-level TEKS. The chapters can be broken down by focal area, with Chapter 1 covering Rational Number Operations, Chapters 2–6 covering Proportional Relationships, Chapters 7–8 covering Expressions and Equations, and Chapter 9 covering more on Proportional Relationships and Data. Academic rigor increases over time to meet the full intent of the primary focal areas. Each chapter's "Teacher Plan" includes a "Practice and Apply" section that summarizes how problems increase in complexity level from 1–4. These levels roughly correspond to the levels on Bloom's Taxonomy.

Each chapter begins with an "Are You Ready?" check to ensure the student has the necessary skill set to be successful. If students are unsuccessful, teachers have access to a quick review and four reteach options. Each chapter includes a TEKS trace, chapter overview, and pacing guide. TEKS trace focuses on the progression of knowledge and skills within the grade level. Chapter overviews highlight what students have already learned and what they will now develop. Pacing guides clearly state the focal areas of individual lessons. For example, a chapter on statistics and sampling includes background and TEKS information for bar graphs, dot plots, circle graphs, making predictions, misleading and appropriate statistics, and comparing two populations. Additionally, each lesson plan lists how exercises, problems, and questions align

with the TEKS. One example of this is in the lesson on the probability of compound events, which requires multiple steps and integrates TEKS from multiple grades and focal areas.

Lessons display the importance of introducing and reviewing key concepts by outlining how previous concepts relate to current concepts. In Chapter 5, the previous concept had students make predictions and determine solutions using experimental data for simple and compound events; the lesson plan describes how this concept aligns with the current concept of having students determine theoretical probabilities related to compound events using sample spaces. The “Teach the Concept” portion of each lesson summarizes how to introduce each concept while also providing the teacher guidance for students who are approaching, on, or beyond grade level. This section sometimes includes alternative strategies for students to collaborate and additional suggested TEKS for spiraling.

Each lesson includes real-world situations promoting the application of mathematics to everyday life. For example, in Chapter 5, a real-world link describes *independent* as a common word in the English language. Students use a dictionary to look up the definition of *independent* and explain how the dictionary can help you remember the mathematical definition of the word. Within each lesson, students have ample opportunity to practice focal area skills.

In Chapter 9, students generate data and create both bar and circle graphs. Within the differentiation guide, teachers have access to differentiation recommendations for verbal, auditory, and kinesthetic learners. This leads into the rest of the lesson, where they formally learn the process for creating circle graphs. Generally speaking, students practice through sets of examples, guided practice, multi-step problem solving, and “HOT Problems,” or Higher-Order Thinking problems. Beyond this, teachers have access to alternative activities and chapter projects so students can practice necessary skills. Finally, diagnostic, formative, and summative assessments are interwoven between lessons; teachers can use these results to plan and provide students individualized intervention.

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

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

## Meets 4/4

The materials sequence concepts from concrete to representational to abstract (CRA) as is appropriate for the grade level and content. Throughout the lessons, the materials include a variety of types of concrete models and manipulatives, pictorial representations, and abstract representations, as appropriate for the content and grade level. They also support teachers in understanding and appropriately developing students' progression along the CRA continuum.

Evidence includes but is not limited to:

The online virtual manipulatives resource included with each lesson provides students with a digital means to explore concepts and teachers with a way to create problem-based learning opportunities. The resource contains algebra tiles, base ten blocks, centimeter cubes, a clock, connecting cubes, currency, fraction circles and tiles, geoboard and bands, a hundreds chart, number cubes, number lines, a spinner, tangrams, a thermometer, and two-color counters. Also included in this resource is a variety of hands-on manipulatives to be used within the classroom. The materials provide pictorial models within the lesson components so that students can transition from their concrete exploration to representational practice. To further increase the rigor towards the abstract, the materials include multi-step problem solving and higher-order thinking questions.

Throughout the materials, teachers are given suggestions on how to understand and appropriately develop students' progression through the CRA continuum, whether they are approaching, on, or beyond grade-level proficiency. The "Are You Ready?" section in the chapter overview of the teacher plan has quick checks for the teacher to gauge student understanding, and if students have difficulty with any exercises, the materials provide an additional example to clarify misconceptions. This section also included a diagnostic test.

Chapter 1, Rational Numbers, begins with a graphic explaining when students will be able to apply the information learned into their real life. It continues with a foldable then moves on to tables, numbers lines, and Venn Diagrams to reinforce the concept.

In Chapter 2, teachers are provided with guidance teaching unit rate by pointing out to students that the positions of the quantities being compared in a rate can be reversed. In one pictorial representation, the unit rate given is four juice boxes per dollar. Students are encouraged to analyze the problem to determine which rate is more helpful. If a person wanted to know how many juice boxes they could buy for \$7, the unit rate per dollar would be more helpful. But if a person wanted to compare the cost of juice boxes at different stores, the unit price per juice box would be more helpful.

In Chapter 4, students work on modeling circumference. Students cut string the length of the circumference of circular objects and measure the diameter. After measuring the circumference of several objects, students complete a table. This table includes the object, circumference, diameter, and the ratio of circumference to diameter. Students then create their own rule based on what they notice about the circumference and diameter ratio. Students then progress within the activity by predicting circumference based on the diameter and test their rules. This chapter also includes a hands-on lab lesson that uses models for the area of circles. The students are instructed to fold a paper plate in half four times to divide it into six equal sections. The students then label the parts of a circle, including the radius and circumference. Later the students are asked to cut out each section of the circle.

In a hands-on lab lesson in Chapter 5 on modeling proportional relationships, students use centimeter cubes to arrange the number of replies two students received in an online discussion group. Each student posted four comments, and a table shows the number of replies for the first two comments. From the information given, students complete a table and graph data on a coordinate plane to determine if each data set represents a proportional relationship. Later in Chapter 5, students see how a proportion is an equation. In the introduction, students complete an example of solving proportions using cross products. Following the introduction, the guided and independent practice contains a variety of questions asking students to solve proportions with and without models. The materials include common error guidance as learners transition to abstract concepts.

In a hands-on lab lesson in Chapter 7, students use algebra tiles to model and solve two-step equations. The lesson then launches into pictorial representations in the form of algebra tiles for students to reference while practicing. The chapter has bar diagrams for students to view to better connect the concept of solving equations. Students also solve multi-step problems and higher-order thinking questions labeled as create, analyze, and evaluate. The models, manipulatives, and representations are used for concept exploration and attainment for the primary focal area requiring students to recreate the manipulatives used during the lesson by drawing the concept to show understanding.



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

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

## Meets 4/4

The materials provide strategic and integrated instruction in all components of mathematical rigor: conceptual understanding, procedural fluency, and application. Throughout the lessons, the materials include some support for students to build their vertical content knowledge by accessing prior knowledge and understanding of concept progression. The materials also include some tasks and problems that intentionally connect two or more concepts, as appropriate, for the grade level and provide opportunities for students to explore relationships and patterns within and across concepts. The materials have support for teachers in understanding the horizontal and vertical alignment guiding the development of concepts.

Evidence includes but is not limited to:

The materials include supports for students to build their vertical content knowledge by accessing prior knowledge and understanding of concept progression. The materials contain tasks that use familiar models and strategies from previous units but do not always connect to what will be used in future grade levels. The “Plan and Present” resource in each chapter contains tasks that help students connect concepts that are appropriate to their grade level. Even though the materials provide opportunities to understand how mathematical ideas might connect to one another, there is limited evidence the materials help teachers question students in order to make connections between concepts. The suggested questions for teachers are directly related to the concept being taught. For example, the launch of the lesson may provide students the opportunity to examine patterns within a concept to make connections, but there is less evidence of examining relationships across concepts.



In the digital components, within the “Teach the Concept” tab, a section entitled “Mathematical Background” explains how to connect new learning to previously learned concepts, knowledge, and skills. For example, in Chapter 4, Understand Proportions, before addressing equivalent rates and ratios, the material provides teachers with options to review previously learned methods (bar diagrams, proportions, equivalent fractions, unit rates, double number lines) to solve prediction and comparison problems involving ratios and rates.

The materials do provide opportunities for students to connect to previously learned concepts, knowledge, and skills. In Chapter 7, Equations and Inequalities, one lesson begins with the “Are You Ready?” section that consists of a “Quick Review” and a “Quick Check.” In the Quick Review section, students demonstrate previously learned concepts with two examples. In example one, students write the phrase as an algebraic expression. In example two, students use numbers to find the solution to the equation. In the Quick Check sections, students solve problems that are directly related to the examples explained prior. The materials provide vertical content knowledge by providing the teacher with a “Lesson Launch” for each lesson in the unit. These launches use prior student understanding to prepare students for what is to come. Teachers are also given a diagnostic test to administer to students in order to gauge their understanding of the previously learned concepts, knowledge, and skills.

The materials also include tasks and problems that intentionally connect two or more concepts as appropriate for the grade level. The materials also provide some opportunities for students to explore relationships and patterns within and across concepts. The multi-step problem solving contains spiral review, and the teacher examples mention a specific strategy. In a Chapter 7 lesson on solving equations with rational coefficients, there is a “TEKS Skill Trace” provided. TEKS Skill Traces map concepts students have already learned, what they will learn in this lesson, and what they will learn in future lessons and are available for each lesson. Prior to this lesson, students take part in a hands-on lab to model and solve equations. This lab uses similar bar diagrams as the students used in a prior lesson on percentages. The students use a bar diagram to organize the situation.

The “Plan and Present” resource in each chapter of the materials includes support for the teachers in understanding the horizontal and vertical alignment guiding the development of concepts. Within the Chapter Overview, the section entitled “Mathematical Background” explains how the skills covered in each lesson progress vertically and horizontally, enhancing the teacher’s understanding of how students should progress in their knowledge and skills throughout the materials. However, information about how the materials align to the next grade is not always provided. In Chapter 7, Equations and Inequalities, the mathematical background for Lessons 2 and 3, One-Step Equations, explains that in previous grades, students modeled and solved one-step equations, and they will increase their fluency in solving these equations using rational numbers. The materials direct teachers to have students recall the properties of equality in order to solve equations. For Lessons 4 and 5, Two-Step Equations, the mathematical background provides a horizontal reference to earlier in the chapter when students learned how to write and solve one-step equations. They are provided with a table of

contents and brief pacing, which provides the topic and a suggested number of days. Teachers are also given a correlation document that outlines which TEKS are covered in each lesson. There is some correlation provided to teachers between current TEKS and those covered in previous grade levels, hinting at vertical alignment; however, there is no evidence in the materials that teachers are provided with an explanation of the depth, breadth, and complexity of current concepts and their connections to the expectations of student understanding for the next year.

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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, designed to engage students, that address content at the appropriate level of rigor and complexity (conceptual understanding, procedural fluency, or application) as identified in the TEKS and as appropriate for the development of the content and skill. Throughout the lessons, the materials integrate contextualized problems, providing students with some opportunity to apply math knowledge and skills to new and varied situations. The materials also include some teacher guidance on anticipating student responses and strategies. The “Mathematical Processes Handbook” outlines for the teacher the mathematical concepts and goals behind each task.

Evidence includes but is not limited to:

Throughout the materials, students are guided through CRA with increasing depth and complexity. In Chapter 1, conceptual understanding is built by launching the lesson by having students determine which fractional part of students eating a hamburger also chose to order cheese. The teacher-led examples in this lesson progress through the procedure by multiplying rational numbers by simplifying first. The guided practice continues to move through procedural to real-world problems and concludes with multi-step problem solving. Each lesson throughout the materials follows this pattern to ensure students work through the CRA process. As the year progresses, the complexity of the units increases. The seventh-grade units start with rational numbers and proportional relationships. The skills learned in these chapters

are used in future units, such as proportionality to percent, probability, geometry, equations, and linear relationships. The skills learned continue to build from one unit to the next. The seventh-grade units end with statistical analysis and personal financial literacy.

Students work through the CRA process, and the materials outline for the teacher the mathematical concepts and goals behind each task. The materials provide a mid-chapter check and formative assessments in the guided practice section to assess students' understanding of the concepts being taught in each lesson. Chapter 1 has a formative assessment where the teacher has students work in pairs to complete Exercises 1–3. One student verbally walks through the steps to determine each product while the other student listens and encourages. After each exercise, the teacher has the second student ask clarifying questions. There is some evidence that explaining how following the progression of each task builds student efficacy towards mastery or conceptual understanding.

The materials integrate contextualized problems throughout, providing students some opportunity to apply math knowledge and skills to new and varied situations. In Chapter 1, students have to compare and order fractions from different real-world scenarios. One such context is to determine what fraction of students who watch a particular show actually recorded the show. Although the context of the problems presents students with fractions in different world scenarios, the problems do not include operations with decimals, which would be included in the grade-level appropriate TEKS.

The materials provide some teacher guidance on anticipating student responses and strategies. For example, the “Plan and Present” section in the teacher reference section reviews essential questions and provides sample answers. The “Practice and Apply” tab includes a section entitled “Watch Out,” which provides teachers with common misconceptions on student responses and strategies, as well as how to combat those misconceptions. In Chapter 1, Lesson 6, Fluently Add and Subtract Rational Numbers: Unlike Fractions, the materials direct teachers to watch for students who may have trouble with adding and subtracting unlike fractions if they only rename the denominators using the LCD. Teachers should have students show by what number they are multiplying both the numerator and denominator to rename the fraction. The examples in the teacher plan may have teachers use a specific strategy, but they do not rationalize as to why the strategy is appropriate at that time. The materials are not sequenced based on the complexity of the strategy, but rather on the ability level of the students or the complexity of the questions, which can be identified in the practice and apply section of the teacher plan.

The materials provide some teacher guidance on preparing for and facilitating strong student discourse grounded in the quality tasks and concepts. Throughout the materials, teachers are provided with questions and activities to facilitate and support discourse, but there are no rubrics to provide feedback during verbal discourse. In Chapter 6, teachers are provided with directions in facilitating students through the activities of “Round Robin” and “Find the Fib.” To engage in Round Robin, teachers have students work in pairs to complete an exercise. Student 1 generates an x-coordinate. Then Student 2 generates the corresponding y-coordinate. Then

Student 1 graphs the ordered pair on the coordinate plane. Students alternate roles for each new x-coordinate. Teachers are not provided with how to direct student misunderstandings or misconceptions. In the materials, rubrics are provided for the performance-based tasks, but there is no evidence of rubrics provided for teachers to give students feedback based on discourse. The ELL guide does provide rubrics to assess the oral and writing skills of students who are English Learners, but not all students.

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

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

## Meets 4/4

The materials provide teacher guidance and support for conducting fluency practice as appropriate for the concept development and grade. Materials integrate fluency at appropriate times and with purpose as students' progress in conceptual understanding. Additionally, materials contain some scaffolds and supports for teachers to differentiate fluency development for all learners.

Evidence includes but is not limited to:

Materials include some teacher guidance and support for conducting fluency as appropriate for the concept development and grade. Each lesson progresses from basic practice to "Higher-Order Thinking" (HOT) questions. The mathematical backgrounds included in each chapter overview explains how students achieved conceptual understanding in prior grades. Then, in the lessons that follow, the materials contain reteach strategies as well as strategies and techniques on how students who have not yet shown fluency can hone or demonstrate their fluency with the "new" material. The materials provide fluency activities that encourage strategic and flexible use of strategies.

The "English Language Learner's Guide: Book G" provides the teacher with a comprehensive reference that supports connections between concept development and fluency. The guide begins with "Building Math Concepts" and "Language Skills." It includes sections like "Helping All Children Learn Mathematics" and "Integrating Language Development with Mathematics." The Integrating Language Development with Mathematics section is broken down into seven

key goals that allow teachers to meet the challenges of combining second language instruction with mathematics. However, there is no evidence that the materials provide a description of the purpose behind the fluency practice within these programs.

The materials integrate fluency opportunities as appropriate for the concept development and grade, but it is not always explicitly stated. Lesson 5-a models how to add and subtract rational numbers and targets students' understanding of how to use number lines to model addition and subtraction. Students use number lines to complete several more problems, but there is no reference to building fluency. In Lesson 1-9, the teacher asks an approaching level student how any whole number can be expressed as a fraction, and then the reciprocal of that fraction. Reteach activities are provided for the current lesson only and not a previous skill to help students who have not yet mastered the desired level of fluency make connections to previous concepts. Instead, fluency practice worksheets are found online.

The materials do include scaffolds and supports for teachers to differentiate fluency development for all learners. The "Plan and Present" resource included with each lesson throughout the materials provides scaffolding suggestions for students needing additional experiences and opportunities to meet grade-level fluency expectations. For example, within the Launch the Lesson tab of Lesson 7-1, Equations and Inequalities, the materials prompt teachers to have students explain how the word equals helps them remember the definition of the term equation. For students who are beyond grade level, BL, the instructions advise teachers to have students discuss why the solution to the inequality  $x + 5 < 10$  is an infinite number of values and why the solution to the equation  $x + 5 = 10$  is a unique value. The materials also provide guidance for determining if students need differentiated supports for fluency activities within each chapter. Each chapter includes diagnostic assessments to assess student fluency. In addition, within the "Are You Ready?" section in the Chapter Overviews, there is an online readiness quiz and a quick review. Based on the results of this diagnostic exam, students receive a table to address their individual needs before beginning the chapter. The same occurs for students approaching level, needing intensive intervention, and performing beyond level.

While the materials provide numerous opportunities to support fluency, the textbook and accompanying resources do not provide a specific year-long plan for building fluency to the concept development and expectation of the grade level. Materials do provide a content brief, which can be found in the program overview. Also, each chapter provides a pacing guide for the expected amount of time each lesson or activity should take. .

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

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

## Meets 4/4

The materials provide support to students in the development and use of mathematical language. Throughout the lessons, the materials include embedded opportunities to develop and strengthen mathematical vocabulary. Online materials include guidance for teachers on how to scaffold and support students' development and use of academic mathematical vocabulary in context.

Evidence includes but is not limited to:

The materials include embedded opportunities to develop and strengthen mathematical vocabulary. The "Plan and Present" resource included with each chapter demonstrates a strategic approach to developing the mathematical vocabulary of students. A "Vocabulary" tab is included within the "Chapter Overview" resource, which contains a list of the vocabulary words for the chapter. Additionally, materials contain vocabulary activities, "Visual Kinesthetic Vocabulary Cards," and the "Student Built Glossary" that can be used as a vocabulary study guide. Finally, the chapter overviews include the "Texas Course Glossary" with definitions for vocabulary necessary for the lessons. The materials highlight the continued use of vocabulary; however, there are no learning goals that explicitly address the development of mathematical vocabulary.

The "Professional Development" section also provides an opportunity for teachers to strengthen the students' vocabulary. In this section, a teacher can find an article on developing academic vocabulary. This document outlines the need and strategies for teaching academic vocabulary to students. One such learning strategy for teaching academic vocabulary is using context to unlock the meaning of unknown words or using the Six-Step Strategy as outlined by Marzano.



The materials do support language development and the use of academic vocabulary for English Learners (ELs) by looking up cognates for the given mathematical vocabulary. The ELL handbook also provides language prompts for Beginner, Intermediate, and Advanced students that are oral and written discussion starters. Although the materials note the ELPS, the learning goals do not address the development of mathematical vocabulary. The materials use formal vocabulary throughout the lessons rather than using informal language to make connections. For example, Lesson 6-3 uses the mathematical term *slope* when solving problems. There is no evidence that the informal terms of *slant*, *lean*, or *incline* are used to make a connection to *slope*.

The vocabulary is clearly outlined and intentionally introduced in the appropriate chapter of each lesson. The teacher plan also directs teachers to have students to follow the routine choral reading of saying each term out loud and having students say each term out loud after the teacher. The materials provide cooperative learning strategies that provide students to listen, speak, read, and write using the mathematical vocabulary embedded in a set of problems or tasks. For example, in Lesson 1-3, Add and Subtract integers, students work in small groups. Students make index cards with vocabulary terms from the lessons then make cards with several integers, one integer for each card. Students draw one vocabulary card and one integer card. They use the cards to say a sentence to their partner.

As teachers move through each chapter, they introduce new vocabulary terms using the choral reading routine.

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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

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. Throughout the lessons, the materials include opportunities for students to integrate knowledge and skills together to successfully problem solve and use mathematics efficiently in real-world problems. They also provide students opportunities to analyze data through real-world contexts.

Evidence includes but is not limited to:

All chapters end with a “Problem-Solving Project” section requiring students to integrate knowledge and skills to develop strategies to solve real-world problems. In Chapter 1, students work on the project, Become a Travel Expert, requiring them to collaborate with their classmates to research the cost of a family vacation. The students research the cost for a family of four to fly roundtrip to a destination of their choosing and record the cost of a flight that is non-stop and one that has at least one extra stop, including the cost of tax. The students then research two different rental cars that would be available at a local company and compare the miles per gallon (mi/gal) that each car averages on the highway. If traveling out of the country, students will need to know the current exchange rates. The students record the exchange rates of the three different countries and then answer the question, “How much is \$100 worth in those countries?” Finally, students choose a vacation spot that is a city in the United States, find a popular restaurant for tourists in their city, look up their menu online, and calculate the cost for a dinner that feeds four people.

In Lesson 2-6, students solve problems in the context of comparing containers of yogurt to cost, miles to gallons, and mixing paint colors to create a larger quantity with the same ratio. All the

contexts presented are developmentally appropriate for grade-level students. The materials require students to integrate knowledge and skills together to make sense of a context and develop an efficient and successful solution strategy within each lesson.

In 3-1, Percent of a Number, the lesson opens with a real-world problem in which students establish how much money they have raised for a dog shelter charity goal using a table. The lesson continues into a guided practice in which students use fractions, decimals, and circle graphs to solve percent-related problems. Other situations presented include financial literacy, graphic novel excerpts, and voting data. In Lesson 3-2, Percent and Estimation, students complete a table that shows the survey results of 200 people and how they learned to play an instrument. The materials instruct students to estimate each percent and express each percent as a fraction in simplest form.

The materials also provide students opportunities to analyze data through real-world contexts. In Chapter 6, Multiple Representations of Linear Relationships, there is a chapter project that requires students to use what they have learned about relationships, rates of change and slope, and linear equations to analyze animal facts on food, heart rate, and speed. Students research data on their favorite wild animals and use the data to write equations. Their equations calculate and answer questions such as the total amount of food eaten, given the number of days, and the amount of food eaten each day, or the pounds of food a zoo with the group's animals would need for one month.

The "Chapter Overview" included with each chapter contains a graphic novel activity that allows students to solve real-world problems from a variety of contexts in a graphic novel format. In Chapter 6, Multiple Representations of Linear Relationships, the graphic novel activity tells the story of three students discussing what happens when you go over your text messaging limit. Students review this data later in the chapter to calculate how the overage will affect his cellphone bill. Also in Chapter 6, another example of the use of real-world contexts to analyze data provides students with a table and requires them to use that table to complete the problem, "Isaac will fence a rectangular part of the backyard for his dog. The width is 3 yards. He wants to know how the amount of fencing he will need changes as he changes the length."

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

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

## Partially Meets 2/4

The materials are partially supported by research on how students develop mathematical understandings. The materials include cited research that supports the design of teacher and student resources and research-based guidance for instruction that enriches educator understanding of mathematical concepts and the validity of the recommended approach. Cited research is academic, relevant to skill development in mathematics, and applicable to Texas-specific context and demographics. Cited research is not found throughout the curriculum, and no current research sources are cited (dates between 1956 – 2011). Additionally, no clear bibliography is present within the materials.

Evidence includes but is not limited to:

The materials include cited research that supports the design of teacher and student resources within the “White Pages” resource located in the “Professional Development” section of the resource. The White Pages cite research about the design of instructional materials and how students learn mathematics. The articles within the White Pages include “21st Century Skills: Preparing Kids for THEIR Future,” “Developing Academic Vocabulary,” “Understanding by Design,” “The Benefits of Write-In Textbooks,” “Does the Use of Technology Improve Learning?” “The Answer Lies in Design?,” “Women’s and Minorities in STEM Careers Advancing Our World,” “Differentiating Instruction in Responsive Middle and High School Classrooms,” “Science, Technology, Engineering and Mathematics (STEM) Education,” “Fostering Visual Literacy in the X-Box Generation,” “Differentiating Mathematics Instruction So EVERYONE Learns,” “Strategies to Teach and Engage English Language Learners in Mathematics

Classrooms,” and “Homework Research Gives Insight to Improving Teaching Practice.” Another resource, “Understanding by Design,” offers a planning framework to guide curriculum, assessment, and instruction. The two key ideas are to focus on teaching and assessing for understanding and transfer as well as designing curriculum “backwards.” The cited research is only in the teacher resources within the White Pages, not in the student materials.

Additionally, the cited research included in the White Pages is academic and relevant to skill development in mathematics. The article, “Strategies to Teach and Engage English Language Learners in Mathematics Classrooms,” describes strategies that can be used to support ELLs in the mathematics classroom. These strategies include simplifying and elaborating language to provide access and opportunities to learn, expressing mathematical information in multiple ways, using drawing and illustrations to support communication, eliminating or addressing linguistic complexities inherent in the English language, assessing ELs in ways that are equitable, and engaging ELs in classroom discourse. Overall, this article communicates that teachers must use whatever means necessary to engage ELs and provide them access to and opportunity to learn mathematics. Though the cited research is academic and relevant to skill development in mathematics, the references for this research are not current and dates between 1956 – 2011.

The materials provide guidance for instruction that enriches educator understanding of mathematical concepts and the validity of the recommended approach in parts of the curriculum; however, it is unclear if the guidance is research-based. The materials start each unit with a pacing guide that shows the recommended sequence of the concepts and the number of days. Materials also include a mathematical background for each lesson. In Chapter 1, Rational Numbers, the materials specified in previous grades, students learned how to add, subtract, multiply, and divide with integers. In Lessons 3 and 4, students work on their fluency with integers. The materials include how to add integers with the same and different signs, how to subtract integers, and the rules for multiplying and dividing integers. Although the materials provide guidance for instruction, the guidance does not cite research.

Additionally, the “eSolutions Manual” in the “Resources” section provides step-by-step solutions to problems along with answers to the problems. However, it does not provide research-based guidance that enriches the educator’s understanding of the concept. While the solutions and answers are provided, there is no rationale as to why the solution is correct or how to explain the concept to the students. There are also several videos on implementing Dinah Zike Foldables, but there is no evidence showing this approach is research-based.

The materials provide some cited research that is academic and relevant to skill development in mathematics and applicable to Texas-specific context and demographics; however, it is not current or consistent. English Learners, for example, are provided with collaborative strategies, differentiation strategies, and an ELL handbook. For example, in Lesson 4-4, it is recommended that teachers have students complete an individualized study and research on circles in art in different cultures. The students are prompted to create posters of examples of the art, descriptions of what it means, and the history of its use. The “Mathematical Process Standards” provide a correlation to the Texas Essential Knowledge and Skills. For example, the “TEKS Skill

Trace” table in each chapter breaks down the TEKS for the grade, highlights the lessons in which they are used, and provides pages for reference. The materials also describe Texas-specific content and demographics within each chapter. For example, Chapter 2, Proportional Relationships, opens with a problem related to the large urban population in Austin, Texas. However, there is no evidence the materials describe the demographics of Texas students in the research used to design the program.

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

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

## Meets 4/4

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

Evidence includes but is not limited to:

The materials guide students in developing and practicing the use of a problem-solving model that is transferable across problem types and grounded in the TEKS. An overview of the model is provided in the “Mathematical Processes Handbook.” The overview defines each component of the model: Analyze, Plan, Solve, Justify, and Evaluate. The problem-solving model is used at the beginning of the multi-step problem solving section of each lesson and continuously throughout the materials. The problem-solving model, grounded in the mathematical process standards of the TEKS, where students are “analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.” The model provides clear opportunities for students to practice and apply each part of the process within the TEKS mathematical process standards. These opportunities are included in several areas, including the “Focus on Mathematical Processes” lessons located in the middle of most chapters, the “Multi-Step Problem Solving” sections at the end of each lesson, and the “Higher-Order Thinking (HOT)” problems at the close of the independent practice in each lesson.

Students are prompted to use the problem-solving model at the beginning of the multi-step problem solving section of each lesson. The first problem of this section is an example that provides a step-by-step outline of the model and directions for completion. The outline designates Step 1 as Analyze, followed by the bolded phrase “Read the problem.” Students are then prompted to circle the information they know. Next, the students will underline what the problem is asking them to find. After the example, the directions tell students to “Use the problem-solving model to solve each problem.” Each chapter also provides the opportunity to focus deeply on the mathematical process. For example, in Lesson 2-1, Unit Rates, students apply the problem-solving model within the multi-step problem-solving activity. At the end of Chapter 2, the chapter review contains another multi-step problem-solving model that uses the same steps as the lessons for continuity. Another example can be found in Chapter 8, Develop Geometry with Algebra, Hands-on Lab 4-a, Model Area of Circles. This lab includes pictures that allow students to visualize the elements of the problem; steps breaking down the problem, prompting students to connect models to a formula for determining the area of a circle, and an “Organize Ideas” section that prompts students to substitute values and write their own formulas.

The materials provide guidance for teachers to support student reflection of their approach to problem solving. In Chapter 3, Apply Proportionality to Percent, students are provided with an “Analyze and Reflect” activity where they organize ideas, work with a partner to complete the graphic organizer about percent and bar diagrams, and analyze relationships by using the pattern in the table to determine 80% of 150. The word “Analyze” in bold purple print is written as the first component of the problem-solving model included with the multi-step problems at the end of each lesson. The materials then prompt students to “Read the problem, circle the information you know, and underline what the problem is asking you to do.” This guidance continues as students complete the remaining parts of the problem-solving model. Students are asked the following questions: “What will you need to do to solve the problem? Write your plan in steps,” “Use your plan to solve the problem and show your steps,” and “How do you know your solution is accurate.” In Lesson 7-6, Solve One-Step Inequalities, the plan component of the multi-step problem-solving activity includes the steps students use to choose the minimum score a student can receive on their last quiz to earn at least an 85% grade in the class. The steps read as follows: “Step 1: Determine the... she earned on the first four quizzes” and “Step 2: Write an inequality she must use to determine what she must score on the....” The materials prompt students during the problem-solving process with questions such as, “How do you know your solution is accurate?” “Does the answer make sense?” and “Use the information in the problem to check your answer.” Each chapter also has a reflection section at the end.

The materials provide guidance for teachers to support student reflection of their approach to problem-solving. In a Chapter 2 lab about rational numbers, teachers are given specific instructions to push students to reflect and post student reflections around the classroom. Teachers are prompted to have students work in pairs to complete exercises. Students share their real-world problems with another pair of students.



The “Diagnose Student Errors” component in the “Multi-Step Problem Solving” section of the “Teacher Plan” also provides guidance for teachers. In Lesson 1-7, the teacher guides students through the model using the “Circle the Sage” activity in which the teacher polls the class to see which students have a solid understanding of how to solve the problem in any given exercise or lesson. These students, the sages, spread around the room while the rest of the class divides into small groups. Each group member reports to a different sage, and the sages lead the discussion on how to solve the problem. Another example can be found in Lesson 2-4, Proportional and Nonproportional Relationships. Teachers use the “Talking Chips” technique to facilitate this. As a group, students discuss each step of the four-step problem-solving model. Students must place a chip in the center of the table each time they meaningfully contribute to the discussion, offering their opinions and ideas. After they have used all of their chips, they may no longer contribute to the discussion. All students must use all of their chips.

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

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

## Meets 4/4

Throughout the lessons, the 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. They also provide opportunities for students to select and use technology (e.g., calculator, graphing program, virtual tools) as appropriate for the concept development and grade. In addition, the materials provide teacher guidance on tools that are appropriate and efficient for the task.

Evidence includes but is not limited to:

The “Plan and Present” section provides teacher guidance about the tools introduced within the materials. Additionally, each chapter overview breaks down the entire chapter and provides support for teachers as well as states which manipulatives will be used in the chapter. The Hands-On Labs included in most chapters provides professional development videos for teachers sharing the tools that are appropriate and efficient for the task. The professional development video of Chapter 1 Hands-On Lab 1a, Model Rational Numbers, emphasizes the importance of mastering rational and irrational number concepts. In addition, it discusses how to model square numbers by cutting squares out of grid paper or using a calculator.

Some lessons in the materials provide a section titled “Select Tools and Techniques” to solve a problem. In Chapter 3 Hands-On Lab 5a, Model Percent of Change, students answer the question, “How can you use multiple representations to show a percent of change?” Materials prompt students to use any method they have learned, such as drawing a bar diagram or model

or using mental math to find the percent of a number.

The materials provide opportunities for students to select and use technology as appropriate for concept development and grade. For example, in Lesson 4-4 Circumference, students have three sketchpad resources, one of which is The Geometer's Sketchpad. This is a software for teaching mathematics that gives students a tangible, visual way to learn mathematics. One task in the lab requires students to measure the circumference and the diameter of several circles and make a table of the measurements. Students plot the measurements on a coordinate graph, construct a ray through the origin and any of the measurements, and then explore the relationship between the slope of the ray and the ratio of the circumference to the diameter.

In Chapter 5, Apply Proportionality to Probability, students apply math to the real world and design a simulation using virtual manipulative technology that can be used to predict the probability of taking a four-question multiple-choice test with four answer choices and getting all questions correct by guessing. Students work with virtual manipulatives such as algebra tiles, base ten blocks, centimeter cubes, clock, connecting cubes, currency, fraction circles, fraction tiles, geoboards and bands, hundreds chart, number cubes, number line, spinner, tangrams, thermometer, and two-color counters. The virtual manipulatives shared in the online textbook also provide students with a "Help" section in the bottom taskbar. This section provides students with a step-by-step written tutorial of how to use the platform, the toolbar functions, and the various manipulatives.

The "Hands-On Labs" included in most chapters provide students opportunities to select grade-appropriate tools for solving tasks. In Chapter 5, Hands-On Lab 1a, Sample Spaces, students create a tree diagram from a coin toss and rolling a number cube. The question at the beginning of the lab asks, "How can I use multiple representations to determine the number of outcomes for an action?"

The 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. The "Launch the Lesson" activities at the start of most lessons allow students to use representations from the grade-level TEKS to solve tasks and enhance their understanding of concepts by exploring mathematical ideas and making and testing conjectures. In the "Launch the Lesson" activity in Lesson 6-2, Equations of Linear Relationships, the materials ask students to investigate the relationship of total cost to the number of people who are going on a trip to the museum. Students complete a table and create a graph to determine if the situation represents a proportional linear relationship. As the lesson progresses, students learn a linear equation is an equation whose graph is a line and how to create a graph of the linear equation by using a table or ordered pairs.

The "Graphing Technology Labs" included in some chapters throughout the materials provide students opportunities to select grade-appropriate technology for solving tasks. In Chapter 6, Graphing Technology Lab 4a: Nonproportional Linear Relationships, students answer, "How can I use multiple representations to represent and analyze nonproportional linear relationships?"

and “How can I select tools to compare additive and multiplicative relationships?” Students are prompted to use a graphing calculator to enter the equation  $y = 2x - 4$  and identify the x- and y-intercepts using [TRACE] and arrows. Then the materials prompt students to repeat this process with other equations to represent and analyze nonproportional linear relationships.

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

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

## Meets 4/4

The materials provide opportunities for students to select appropriate strategies for the work, concept development, and grade. Throughout the lessons, the 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. They also support teachers in understanding the appropriate strategies that could be applied and how to guide students to more efficient strategies. In addition, the materials provide opportunities for students to solve problems using multiple appropriate strategies.

Evidence includes but is not limited to:

In Chapter 1, Rational Numbers, students are prompted to select tools and techniques in order to solve the questions. Students are able to refer back to mathematical processes learned in order to assist with solving the problem and must draw a model of the verbal expressions. Finally, students evaluate the expression and explain how the model shows the division process.

The 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. In Lesson 2-3, Convert Unit Rates, the materials prompt students to use their estimation skills to complete a graphic organizer. Students select a technique as appropriate to approximate the measurement of lengths for a given unit of length.

The “Plan and Present” resource included with each lesson supports teachers in understanding which strategies are appropriate for solving a task and how to give students the most efficient strategies. The mathematical background in each lesson provides support for teachers in understanding strategies developed within the materials. In Chapter 4, the materials discuss the use of proportions and scale factors models to solve problems involving scale drawings. Students are also given a foldable with two strategies for solving percent problems. Later on in the chapter, students are given the chance to use these strategies along with others to solve percent problems.

In Chapter 6, Focus on Mathematical Processes, students solve problems by making a table. Materials emphasize making a table as a useful strategy for solving many kinds of problems and prompt teachers to have students work with tables involving numbers, objects, and geometric figures.

In Chapter 7, students practice using algebra tiles, drawing a model, and using inverse operations of an algebraic representation in order to solve two-step equations. Students are prompted to use multiple strategies such as proportions, benchmark percents, bar models, and equivalent fractions. The design of the materials includes opportunities for students to learn multiple appropriate strategies for solving problems.

The materials support teachers in understanding which strategies are appropriate for solving a task with an additional resource labeled, “Real-World Problem-Solving Graphic Novels.” The teacher edition of this handbook explains which strategies to use for each problem within the handbook. For example, in the lesson Percent: Wits for Tips, materials explain how to use mental math to estimate and find the tip on a bill.

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# McGraw Hill Texas Math Grade 7

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

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

## Meets 4/4

The materials develop students' self-efficacy and mathematical identity by providing opportunities to share strategies and approach to tasks. Throughout the lessons, the materials support students to see themselves as mathematical thinkers who can learn from solving problems, make sense of mathematics, and productively struggle. They also support students in understanding that there can be multiple ways to solve problems and complete tasks. In addition, the materials support and guide teachers in facilitating the sharing of students' approaches to problem solving.

Evidence includes but is not limited to:

The materials foster a mathematical community that ensures all students participate and engage as mathematical thinkers who can learn from solving problems and making sense of mathematics in each lesson. The "Program Overview" contains a "Cooperative Learning Strategies" resource that provides structures to support the development of a mathematical community where students are active learners of mathematics. For example, in the activity entitled "Paired Heads Together," the materials direct teachers to pose students with a question or problem and allow adequate time to think. Students write their ideas for solving on a piece of paper and then pair with another student to compare ideas. Using the best idea, student pairs then work together to solve the problem. The materials suggest students may be re-paired for further communication and reasoning. Students participate in productive struggle while working through the problem-solving process lesson in each chapter, as well as in the chapter project, which allows students flexibility in creating their final product. The materials also provide some opportunities during independent practice to "Find the Error," where students are presented with a student mistake and have to correct it.

The materials promote mathematics as a field of study, problem-solving projects, performance tasks, and STEM projects. Each chapter contains a chapter project that allows students to step away from memorized algorithms into real-world application. For example, in Chapter 5: Apply Proportionality to Probability, students design a game and decide if it is fair or unfair. These projects represent real-world mathematical scenarios in a problem-solving method that allows students to apply the math they have learned into everyday life in society and the workplace.

The materials provide an alternate teaching strategy for struggling students, a “Watch Out” section for noticing a common error, and a “Diagnosing Student Errors” section within “Multi-Step Problem Solving.” Each lesson also provides a “Ticket Out the Door” to formatively assess student understanding. The materials provide support for monitoring students as they develop solution strategies within each lesson. In Lesson 7-3, Solve Equations with Rational Coefficients, the Watch Out section reminds teachers that students may have difficulty determining the reciprocal of whole numbers such as 5. The materials prompt teachers to review that all whole numbers can be written as a fraction with a denominator of 1.

Within Lesson 8-1, Angle Relationships, activities for differentiated instruction based on learner type are provided. In the lesson, there are activities for naturalistic learners. These activities recommend naturalistic students make a list of objects that have acute, right, obtuse, and straight angles. For instance, various sea animals such as starfish have angled points, and a bolt of lightning can also display angles.



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

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

## Meets 4/4

The materials prompt students to effectively communicate mathematical ideas, reasoning, and their implications using multiple representations. Throughout the lessons, the materials provide students an opportunity to communicate mathematical ideas and solve problems using multiple representations, as appropriate for the task. They also 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.

Evidence includes but is not limited to:

In Chapter 1, materials prompt teachers to introduce each vocabulary term using the choral response method of saying each term aloud after the teacher. An example provided by the materials is, “In like fractions, the denominators of the fractions are the same. An example of this is the fractions  $\frac{1}{3}$  and  $\frac{2}{3}$  are like fractions.” Teachers then ask, “Are the fractions  $\frac{7}{9}$  and  $\frac{4}{9}$  like fractions?” The “Vocabulary” section in each chapter begins by providing all the vocabulary words for the chapter and indicates their corresponding lesson. Teachers are also provided with a vocabulary activity that helps to support EL students. The Student-Built Glossary is available for students to use as a vocabulary study guide. The materials provide teachers with a vocabulary “White Paper” that has a list of effective strategies.

The Key Concept Check-in Chapter 1, Rational Numbers, requires students to use their foldable to help review the chapter. Students then share the foldable with a partner and take turns summarizing what they learned in the chapter while each partner listens carefully. The materials provide students an opportunity to communicate mathematical ideas and solve problems using multiple representations, as appropriate for the task.

The “Hands-On Labs” included in most chapters include tasks that provide students with opportunities to share and discuss mathematical ideas and representations using visual, physical, contextual, verbal, and symbolic representations. In Chapter 2 Hands-On Lab 2b, Model Proportional Relationships, students answer the question, “How can I use multiple representations to determine how proportional and nonproportional relationships are alike or different?” Throughout the lab, students work with a partner to identify and model proportional relationships with centimeter cubes, tables, coordinate grids, and equations. Students are also expected to explain their reasoning for each solution. At the conclusion of the lab, students create a table and graph to describe a real-world situation that represents a proportional relationship. In addition, the materials prompt students to explain how they would change their situation so that it represents a non-proportional relationship.

In Lesson 2-5, students interview each other to think-aloud through their process of solving specific problems. There are multiple cooperative activities suggested for each lesson. The materials also provide exit tickets at the end of each lesson that ask students to write about a specific concept. For example, at the end of Lesson 2-5, students write about how they can tell the relationship between two quantities is proportional.

In Lesson 7-1, students use an interactive balance to communicate their thinking when solving equations. Later, in Lesson 7-4, students engage in a “Think-Pair-Share” where they have one minute to individually think through their responses to specific exercises. Students then complete the exercises with a partner, ensuring that each student understands how a bar diagram models a two-step equation. The teacher calls on one pair of students to share their responses with the class. The material in each chapter contains tasks where students, orally or through written expression, can solve using a variety of mathematical representations.

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

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

## Meets 4/4

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

Evidence includes but is not limited to:

The Program Overview contains a "Cooperative Learning Strategies" resource that provides strategies and opportunities for all students to discuss mathematics during every lesson with partners, small groups, and the whole class. In the activity Paired Heads Together, teachers pose students with a question or problem in a whole group setting and allow adequate think-time. Students write their ideas for solving on a piece of paper and then pair with another student to compare ideas. Using the best idea, pairs then work together to solve the problem. Students may be paired with another partner for further communication and reasoning. Each lesson provides Cooperative Learning Strategies.

The materials integrate discussion to support students' development of content knowledge and skills as appropriate for the concept and grade-level. Within the Plan and Present resource, the materials describe the opportunities for discussion in all phases of concept and skill development for each lesson. The materials present these discussion opportunities as Cooperative Learning Strategies, which appear in multiple phases of the lesson plan. For example, in Lesson 4-3, Changes in Dimension, the first Cooperative Learning Strategy is shown in the "Launch the Lesson" section: Numbered Heads Together. In this activity, students work in

small groups to complete the Launch the Lesson activity. Next, the “Teach the Concept” tab mid-lesson includes the Think-Pair-Solo activity in which teachers give students one minute to think through their responses then work in pairs to complete an exercise. Students then use Numbered Heads Together with the multi-step problem at the end of the lesson. Within this activity, students work in a small group to find their solutions.

In Lesson 5-2, students develop their understanding of dot plots through discussion. In the Launch the Lesson activity, students use Paired Heads Together and work in pairs to complete the given exercises, ensuring that each student understands why Wheel B does not display uniform probability. The teacher assigns each student a number, then randomly calls on one numbered student to share their responses with the class. In the Teach the Concept section, the activity is a Team-Pair-Solo where students work in small teams to complete the exercises, ensuring that each team member understands. The teacher then has students work in pairs to complete the given exercise. Next, students work on their own to complete an independent exercise. Finally, they rejoin their original teams to discuss and share their responses. In the multiple-step problem, students use Think-Pair-Share to solve the problem. The teacher gives students about one minute to read the problem, read each step, and think through their solution. Students work with a partner to share their responses, including how to read the problem carefully to determine what the problem is asking for and what information is given in the problem. The teacher calls on one set of pairs to share their responses within a small group or whole group class discussion. Each lesson is set up with the same structure but with different cooperative learning tasks. Some of the lessons also provide an Exit Ticket that requires students to write about a given concept.

The materials guide teachers in structuring and facilitating discussions as appropriate for the concept and grade level. For example, teachers are required to watch a clip-on area and volume. In this clip, the teacher leads a class review of the formula for the area of plane figures and begins a discussion of volume using real-life objects.

Teachers are also provided with a “White Paper” on 21st-century skills to strengthen math skills, which includes communication and collaboration. The “Professional Development” section provides a webinar on setting up your classroom for differentiated instruction and collaborative practice and how to teach mathematical communication.

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

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

## Meets 4/4

The materials provide opportunities for students to justify mathematical ideas using multiple representations and precise mathematical language. Throughout the lessons, the materials provide opportunities for students to construct and present arguments that justify mathematical ideas using multiple representations. The materials assist teachers in facilitating students to construct arguments using grade-level appropriate mathematical ideas.

Evidence includes but is not limited to:

The materials provide opportunities for students to construct and present arguments that justify mathematical ideas using multiple representations. The materials introduce justifying arguments within the mathematical processes handbook. Students justify the conjectures of various hypothetical people. Within each multi-step problem solving section of the lesson, students justify their solutions. In the mathematical processes handbook under 7.1G (pages 15-16), Justify Arguments, students are provided with the opportunity to construct arguments to justify mathematical ideas. Students are then asked to justify their solutions throughout each chapter, which can be found by looking for the MP (Mathematical Processes) symbol followed by Justify Arguments, such as on page 377, in a Hands-On Labs, and in the multi-step problem solving when students have to justify and evaluate, or explain their answer. Also, Lesson 1-6 asks students to justify arguments by choosing an operation to solve each problem. Students are then prompted to explain their reasoning. Students then solve the problem and express their answer in simplest form.

Some exit tickets require students to write about a concept and construct arguments using grade-level appropriate mathematical ideas. For example, in Lesson 5-4, students write about how what they have learned in previous lessons in this chapter helped them with this lesson on

simulations. The teacher can provide sentence stems such as, “In previous lessons, I learned...,” “In this lesson, I learned...,” and “What I learned in previous lessons helped me in this lesson because...” In Lesson 5-5, students write an explanation of how to determine the probability of two independent events occurring. Teachers are provided prompts for student responses within the plan and present section. For example, Lesson 2-8 prompts the teacher to ask questions like, “What does the unit rate, or constant rate of change, represent in the context of the problem?” “What do you need to determine?” “What is the ordered pair that represents 2.5 hours traveled?” and “How can you determine the rate of change for the table?” The lesson also prompts teachers to suggest that students explain their answer or thinking. Each lesson throughout the materials is structured in the same manner as listed above.

The Mathematical Processes Handbook Focus on Mathematical Process G, Justify Arguments, has several discussion strategies to facilitate discussion. The materials provide solutions and methods for diagnosing errors. The following resources are provided for teachers: an overview of the TEKS, a “Launch the Lesson” section with TEKS Skills Trace, Ideas for Use, a “Practice and Apply” section with Ideas for Use, Alternate Strategies, and an assessment that includes a “Ticket Out the Door” for students to explain how using the principles of mathematics can help to solve problems.

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

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

## Meets 2/2

The materials include developmentally appropriate diagnostic tools (e.g., formative and summative progress monitoring) and guidance for teachers and students to monitor progress. Throughout the lessons, the materials include a variety of diagnostic tools that are developmentally appropriate (e.g., observational, anecdotal, and formal). They also provide guidance to ensure consistent and accurate administration of diagnostic tools. In addition, materials include tools for students to track their own progress and growth and 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 include a variety of diagnostic tools that are developmentally appropriate. The materials include formal assessment measures designed to support the teacher in determining a student's understanding and fluency with critical content and skills. Each chapter contains a diagnostic test in Word and PDF format within the tools section of the "Chapter Overview" in the Teacher's Edition. For example, in Chapter 8, Develop Geometry with Algebra, the diagnostic test supports the teacher in determining the students' understanding of the area of triangles and rectangles. The materials also include informal measures such as a checklist for specific content and skills. Prior to the beginning of each chapter, the materials prompt teachers to instruct students to go to the "Track Your TEKS Progress" document on pages xvi-xxii to rate their current knowledge of the TEKS within the chapter. The document includes a list of the seventh-grade TEKS and student expectations with columns for students to rate their knowledge of each. The materials provide numerous formal diagnostic assessments. For

example, in the chapter overview section of the teacher plan, there is an “Are You Ready?” section. Within this section, the teacher will find a pre-test, diagnostic test, and an “Are You Ready?” review to use with students for the upcoming chapter. These materials are on level and appropriate for the grade level and chapter. Also, when launching each chapter, the teacher can send home a family letter in English or Spanish that outlines what the student will learn in the chapter, key vocabulary, and at-home activities. The letter invites the parents to contact the teacher with any questions or concerns. Students can also demonstrate understanding by using the “Track your TEKS Progress” document along with the rate yourself tool, such as the one in Lesson 3-1 that has students rate their comfortability with moving on in the concept. The materials contain tools to allow students to show understanding in a variety of ways within each chapter. This includes but is not limited to “Are You Ready?” assignments, self-check quizzes, e-assessments, tickets out the door, multi-step problem solving, chapter pre-tests, and “got it” checks. Other assignments include chapter projects and performance tasks. Also, students show their understanding with their peers in cooperative learning activities.

The materials also provide guidance to ensure consistent and accurate administration of diagnostic tools. The chapter overview in the “Plan and Present” section breaks down the “Are You Ready?” portion of the text. The materials prompt teachers to use the student page to determine if students have skills that are needed for the chapter. Students also have the option to take the Online Readiness Quiz. The “Quick Check” instructs teachers how to deal with students who have difficulty with the exercises and must present an additional example to clarify any misconceptions they may have. The materials contain an assessment section that provides the various assessments for the chapter. The assessments are also located within the plan and present section. For example, the vocabulary test and diagnostic assessments are located in the chapter overview. The mid-chapter check is a stand-alone link, and the chapter test is located in the “Wrap-Up” section. Teachers are provided with a description of the level of student for which each test was designed. The materials also have a help section that includes a component for assessing your students. This component guides teachers through creating, assigning, and viewing reports in the test generator. The reports section provides teachers with the option to view assignment results, compare classes, grade books, prescription reports, proficiency reports, proficiency charts, progress reports, and item analysis reports. Also, in the assessment generator provided in the resource, teachers can click on the starred section titled “See What’s New in eAssessment.” This section provides teachers with a walk-through on all the components of the assessment generator, along with a search feature to provide further support. The materials include recommendations to support consistent administration of the diagnostic tools within the help section. In the help area, there is a section labeled “Assessing Your Students.” Within this area, there are several views. The videos have tips throughout, including how to make a study guide for a student, how to create additional question sets, how to add limits. These limits include scrambling questions and answers and limiting the number of attempts.

The materials include tools for students to track their own progress and growth. The “Track Your TEKS Progress” document provides opportunities for students to rate their level of understanding of TEKS within each chapter. Prior to beginning a chapter, the materials prompt



teachers to have students go to the document to rate their current knowledge of the TEKS. At the end of the chapter, the materials remind teachers to have students return to the “Track Your TEKS” Progress pages to rate their knowledge again, and they should see that their knowledge and skills have increased. Students are able to use red, yellow, and green faces to rate their comfort level with each content standard before and after they learn it. For example, Lesson 5-5 has students rate themselves by shading in a portion of a pie chart. The materials also provide students with a self-check quiz and the answers to the odd-numbered questions, both of which allow students to monitor their understanding of a specific concept. Each chapter also provides a task for students to reflect on their learning. Chapter 5 has students use what they learned about probability to complete a graphing organizer, and the problem-solving projects also have a reflection component.

The materials also include diagnostic tools to measure all content and process skills for the grade level, as outlined in the TEKS and Mathematical Process Standards. The assessment generator has a section titled “Mastering the TEKS,” which allows the teacher to select specific standards to be assessed. The summative tests will also notate which content TEKS are being assessed on each question. The diagnostic tools included measure all the content provided in the book, but it does not specify the process and skills as outlined in the grade-level TEKS. For example, the Diagnostic Test is broken down by chapter and covers the content found in the content, which is based on the TEKS. However, the test does not specify that this is how it was outlined. The materials include tools to measure all content and process skills, as outlined in the grade-level TEKS. This includes but is not limited to “Are You Ready?” assignments, self-check quizzes, e-assessments, tickets out the door, multi-step problem solving, chapter pre-tests, and got it checks. Other assignments include chapter projects and performance tasks. Also, students show their understanding with their peers in cooperative learning activities. The Multi-Step Problem Solving at the end of each lesson is an informal diagnostic tool designed to measure all content and process skills outlined in the grade-level TEKS. Each exercise is dual-coded with content and process TEKS and tagged with spiral review TEKS. In Lesson 9-2, “Circle Graphs, the Multi-Step Problem Solving,” exercises 7-11 require students to use multiple steps and integrate TEKS from multiple grades/focal areas. These standards include 7.6G and 7.1E.

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

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

## Meets 2/2

The materials include some guidance for teachers and administrators to analyze and respond to data from diagnostic tools. Throughout the lessons, 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. Diagnostic tools also yield meaningful information for teachers to use when planning instruction and differentiation. In addition, materials provide a variety of resources and 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.

Evidence includes but is not limited to:

The materials support teachers with guidance and direction to respond to individual students' needs in all areas of mathematics, based on measures of student progress appropriate to the developmental level. The materials use the designation AL (Approaching Level), OL (On Level), and BL (Beyond Level). Chapter 7, which covers solving equations, moves students through the concept with the use of concrete models, algebra tiles, and solving algebraically. In the teacher plan for Lesson 7-4, the materials provide guidance to the teacher on how to scaffold for various learners. For example, the materials provide alternate strategies for AL and BL students when launching the lesson. In this case, the AL strategy states that the teacher should provide students with a partially completed bar diagram. Teachers are prompted to have students highlight the number that represents the coefficient in the problem. Also, during the "teach the

concept” portion of Lesson 7-4, teachers are given guiding questions for students at all three levels and another alternate strategy for students who are AL. In each lesson of the materials, differentiated activities for each level of learner are provided, as well as a guide to assign homework for each level of learner. The materials provide teachers with a guide to help them determine the level of each student based on their performance on the diagnostic test. This table can be found in the “Are You Ready?” section of the chapter overview. Within this table, the teacher will also find recommended activities for each level of learner. This section of the chapter overview also recommends that teachers use the quick check and pre-test to assess students' level of understanding.

Throughout the materials, diagnostic tools yield meaningful information for teachers to use when planning instruction and differentiation. The materials provide a guide for understanding the results of diagnostic tools located in each chapter overview. In the Plan and Present section, teachers will find a chapter overview. The chapter overview has a section titled “Are You Ready?” The materials suggest to teachers that, based on students' results of the quick check, they may wish to further evaluate their readiness for this chapter by administering the diagnostic test from the assessment masters. The materials then prompt the teachers to use the information to address the individual needs of students before beginning the chapter. They are then provided a table that guides them through the process of determining which students are Approaching Level, On Level, and Beyond Level. The help section provides teachers with guidance to create reports from the assessment data. These reports give the teachers the option to view assignment results, class comparisons, grade books, prescription reports, proficiency reports, proficiency charts, progress reports, and item analysis reports. The reports are color-coded for easy interpretation by the teacher. A sample picture of a report can be found in the assessment by clicking on “See What’s New” and searching reports. The materials also provide a scoring rubric for teachers to use when grading each performance task. The “Response to Intervention” (RTI) section in the chapter overview tells teachers how to proceed based on the results of the quick check and breaks the student into tiers and levels that will help teachers improve the results. In Chapter 4, Apply Proportionality to Geometry, the “Response to Intervention” section under the “Are You Ready” tab provides teachers with guidance based on students' results of the quick check. The materials prompt teachers to further evaluate students' readiness for this chapter by administering the diagnostic test from the assessment masters.

The materials also provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data. The materials provide various activities to use based on the results of the chapter diagnostic exam. Teachers have access to the “Are You Ready?” practice section, the “Quick Review Math Handbook,” and a “Self-Check Quiz” section. In addition, the plan and present section for each lesson provides the teacher with guiding questions to ask students based on their level. When teaching the concept, the materials provide teachers with questions to ask as a result of the students’ understanding of the example problems. For example, in Lesson 2-1, the teacher is provided with several questions after students have completed the first example. In the Approaching level section, students are asked, “What is the rate, 24 miles in 4 hours, expressed as a fraction?” In the On-Level section,

students are asked, “To calculate the unit rate, what do we do? Why?” In the Beyond Level section, students are asked, “If Adrienne continues biking at this rate, how many miles will she bike in 5 hours? How does the unit rate help you determine this?” Within Lesson 2-4, there is an alternate teaching strategy provided for students who are Approaching level. Beyond the plan and present, the materials also provide specific differentiated instruction resources for students depending on their level of understanding.

Administrators are given the opportunity to access content from and share content with instructors. For example, the test generator helps provide instruction to administrators that will allow them to share question sets with teachers and lock the shared content to prevent recipients from editing the content they receive. Administrators can also access multiple school districts and work from one profile. The materials do include data that can be analyzed across multiple spectrums. For example, the Prescription Report details class performance on a selected assignment, and based upon each student's proficiency, students may receive a prescription for the assignment. The Compare Class Report compares the standards covered by two classes and for each standard. The Proficiency Report details class proficiency on all standards during a specific term or date range and for each standard covered. The materials do not include guidance for administrators to support teachers in designing instruction to respond to data.

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**4.3** Materials include frequent, integrated formative assessment opportunities.

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

## Meets 2/2

The materials include frequent, integrated opportunities to monitor and respond to student progress toward development of appropriate grade level and content skill development. Throughout the lessons, the materials include routine and systematic progress monitoring opportunities that accurately measure and track student progress, and the frequency of progress monitoring is appropriate for the age and content skill.

Evidence includes but is not limited to:

The materials include routine and systematic progress monitoring opportunities that accurately measure and track student progress. Each lesson begins with a quick check to review and assess the skills presented in the previous lesson. In the plan and present section, the materials provide a chapter overview, in which teachers will find an “Are You Ready?” section, a diagnostic test, and a pre-test. These are designed to check students' understanding at the beginning of the chapter and allow teachers to determine if students are Approaching Level, On Level, or Beyond Level. Each chapter also contains a mid-chapter check for teachers to monitor students' progress from where they started to where they are at by the midpoint and make adjustments accordingly. Finally, at the end of each chapter, the teacher has multiple versions of the chapter assessment, which are designed for teachers to give to students based on their level of understanding so that they can accurately assess their progress.

Each lesson also allows teachers to monitor students' progress by using an exit ticket. Along with the exit ticket, teachers are provided with suggestions for a quick check based on the students' understanding of the concept. For example, in Lesson 2-3, Multiply Fractions and Whole Numbers, the lesson begins with a quick check to monitor students' progress of the concepts learned in the previous lesson. Mid-lesson, the materials recommend “Think-Pair-Share” and “Trade-a-Problem” activities under the guided practice to assess students' understanding of the lesson's concepts. Finally, during the “Ticket Out the Door” activity, students write a few sentences on how they think the lessons on multiplying fractions and

whole numbers prepare them for using diagrams to solve real-world problems involving the multiplication of fractions using writing prompts. Also, the materials provide progress monitoring opportunities to accurately measure and track student progress. For example, students are prompted to track their TEKS based on the mathematical process standards. In the “Plan and Present” section, teachers are reminded to have each student rate their knowledge of each content standard covered in that chapter at the beginning of each chapter. Then, at the end of each chapter, teachers remind students to rate their knowledge again. Students use red, yellow, and green faces to rate their comfort level with each content standard.

The launch of the lesson has a Building on the Essential Question section that describes what students should be able to do at the end of the lesson. Lesson 6-2 states that students should be able to answer, "How can you express a linear relationship between two quantities in different ways?" When launching Lesson 6-2, students engage in some basic mixed practice for writing linear equations before moving into a multi-step example problem. In return, the teacher plan provides suggested questions to ask students based on their understanding of the concept, which allows them to assess their level of understanding moving forward. As students continue the lesson, the materials provide formal practice in real-world problems, higher-order thinking problems, and multi-step problem solving, all of which are progress monitoring opportunities for the teacher. The materials also provide opportunities to track students independently and in small groups. In Lesson 6-2, the materials suggest students who are approaching level engage in a “Round Robin” activity, while students who are beyond level engage in a “Find the Fib.” The e-assessment allows teachers to create and assign assessments. After students take these exams, teachers can create reports of each student’s progress through mastery.

Frequency of progress monitoring throughout the resources is appropriate for the age and content skill. Within the “Plan and Present” resource included with each lesson, the materials include suggestions to support more frequent monitoring of students demonstrating difficulty to support instructional interventions and response to intervention. For example, the materials suggest a variety of progress monitoring tools as informal and formal assessments. The tools within each lesson include the quick check, cooperative learning activities, “Ticket Out the Door,” and a self-check quiz. The additional tools within each chapter include a diagnostic test, an online readiness quiz, an “Are You Ready?” activity, and the chapter pretest. Students are provided with a mid-chapter check-in for all chapters that allows students to conduct a vocabulary check, key concept check, and a multi-step problem.

The materials also remind teachers when launching the chapter to have students use the student tracker at the beginning of the chapter to rate their current knowledge, and then to do it again at the end of the chapter to see how their knowledge and skills have increased. In the professional development section under TEKS/Texas Assessment, the materials suggest using the student tracker to involve students in their own understanding of the TEKS. It also outlines for teachers to use independent practice, higher-order thinking problems, and multi-step problem solving to help prepare students for the Texas Assessment. Teachers can monitor student progress on these items in the teacher plan, within the practice and apply sections in

which suggestions are given for which exercises students should complete based on the level of complexity and understanding. Students are also guided to the self-check quiz, where they are given the chance to assess their progress based on content for that chapter. For example, in Chapter 5, Apply Proportionality to Probability, Lesson 5-4 provides students with a self-check quiz that can be taken online. Students are also provided with hints throughout the quiz and also receive immediate feedback at the end.

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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 instructional materials provide targeted instruction and activities for all levels of learners, as well as students who struggle to master content and students who have mastered the content.

Evidence includes but is not limited to:

Throughout the units, the students are provided with lessons that include scaffolded questioning examples for various types of learners. These learners include approaching Level, on Level, and beyond Level. The materials provide guidance for differentiation to support struggling students. Teachers are provided with teacher guides for launching the lesson, an outline for teaching the concept, a designation of which practice problems students should do, and additional activities for differentiation based on level. Guidance for scaffolding the lessons are provided in the form of example questions that are broken apart by students' level of understanding. The materials provide teachers with opportunities to develop precursor skills in the area titled "TEKS Skills Trace." This section provides an introductory activity to develop the upcoming concept by focusing on what preceded the concept or skills. Examples of the provided materials included for that provide scaffolding instructions and differentiating activities are multi-step problem solving, investigation and discovery, targeted vocabulary lessons, quizzes for self-assessment, and options for virtual tutoring.

Each lesson begins with an assessment that will allow students to gauge their understanding of prerequisite skills. Following the assessment before each lesson, the students are provided level-appropriate material to meet their individualized needs. For example, in the probability unit, Approaching Level students are asked to brainstorm ideas and access prior knowledge in order to complete a hands-on activity, On Level students are asked to complete math skill



computations, and Beyond Level students are asked to predict what will happen given various constraints in groups. The lesson materials include graphic organizers and criteria for success that will allow students to properly analyze each step of the problem.

The materials provide students with the opportunity to appropriately access prior knowledge in order to have a conceptual understanding of the information. Also provided are additional items for English Learners (ELs), higher-order thinkers, as well as real-world applications to support those who have mastered the content. In addition, materials provide a response to intervention resources in each lesson with additional examples and practice for students who struggle to understand the concepts. “Personal Tutor” resources are included with each lesson as well to provide additional practice developing skills in a variety of ways. The “Personal Tutor” resources are available in both English and Spanish to provide additional support for ELs. While the materials provide some instructional strategies such as videos for the hearing impaired, it does not provide direct support for orthopedic or vision impairment. Materials provide activities for students who have mastered the content.

During the chapter readiness quiz for Chapter 1, students access their prerequisite knowledge of writing fractions in the simplest form by choosing the solution to the fraction  $\frac{16}{20}$  written in the simplest form. There are four answer choices, along with a “Need a Hint?” hyperlink. The hint provides a reminder to list the factors of the numerator and denominator. At the end of the ten-question quiz, students can choose the “grade the quiz” button for immediate feedback on their performance. The materials also include graphic organizers and criteria for success that will allow students to properly analyze each step of the problem. These are included throughout the text at the beginning of each chapter. Chapter 1, Rational Numbers, begins with a foldable that provides students with the ability to understand rational number operations. Chapter 1 also includes hands-on activities that are broken down into steps for maximizing student understanding. A “Personal Tutor” resource is available throughout each lesson to provide additional practice developing skills in a variety of ways. In addition, the “Personal Tutor” resources are available in both English and Spanish.

The differentiated activity for Lesson 4-4, Circumference, specifically targets On Level visual and spatial learners. Students create two-dimensional artwork that has incorporated in its design the vocabulary words circle, center, diameter, circumference, and radius. The artwork should demonstrate the meanings of the words in a creative way, and students will display artwork in the classroom as reminders of the vocabulary. The materials include real-world application activities that allow students to explore and investigate the skills they have learned in multiple ways. This includes a research project within a Unit on Rational Numbers in seventh grade that will allow students to look up the history of Pi and apply it to future lessons. The resource itself also includes five Problem Solving projects and two STEM projects (School Renovation and Sports Recreation), which can be found in the plan and present section. Each chapter also contains a graphic novel animation video.

For example, in Chapter 6, Multiple Representations of Linear Relationships, in a video entitled “Too Many Text,” three students discuss the effects of going over the texting limit. After

walking the students through different texting scenarios, the student responds, “Oh no! What’s this going to cost me?” The video concludes before answering the question; however, Lesson 8-5, Write Equations from Tables and Graphs, returns to the ideas presented in the video and includes a graphic novel frame asking students to write an equation to determine the students’ text messaging bill.

In the “Personal Tutor” video provided for Lesson 7-5, Solve Two-Step Equations using the Distributive Property, an online teacher explains the systematic process for solving the equation  $4(x + 8) = 48$  using two different methods. In the first method, the teacher looks at the question arithmetically by using a bar to represent 48. A visual model splits the bar of 48 into 4 equivalent pieces of  $x + 8$ . The video models how 4 of them are 48, and 2 would be half of that, equaling 24. The video continues to show how one of the  $x+8$  pieces would be half of 24, equaling 12. The video concludes  $x + 8 = 12$  and takes students through the steps for finding the value of  $x$ . Students subtract 8 from both sides of the equation and see that  $x$  is equal to 4. Students will repeat this process using the division property of equality as an optional method for solving the equation  $4(x + 8) = 48$ . Finally, the pause video feature allows students to work at their own pace.

The differentiated activity for Lesson 9-4, Unbiased and Biased Sampling, challenge interpersonal learners to create a file of product surveys and opinion polls that they encounter in magazines, on television, and on the Internet. Students can classify the types of surveys, evaluate whether the surveys are biased, or use them as models for their own surveys. Also included in the materials for students who have mastered content is a section of self-paced materials. In Unit 3, Apply Proportionality to Percent, the self-paced resource allows students to give themselves feedback as they advance throughout the content. This includes mid-chapter checks that require students to explore vocabulary, key concepts, and real-world applications. There is also a guided practice that provides students with the opportunity to rate themselves. For example, students are provided with multi-step problems that give students the necessary scaffold to solve problems and justify their responses.

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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 instructional methods that appeal to a variety of learning interests and needs. Throughout the lessons, the materials include instructional approaches to engage students in mastery of the content. They also provide some support towards developmentally appropriate instructional strategies, flexible grouping, and multiple types of practices (e.g., guided, independent, and collaborative) and provide guidance and structures to achieve effective implementation.

Evidence includes but is not limited to:

The materials include instructional approaches to engage students in mastery of the content. The materials in grade 7 use multiple teaching strategies to meet learners' needs. Included in the materials are virtual manipulatives, visual representations, symbolic algorithms, and graphic organizers. These manipulatives include algebra tiles, integer tiles, spinners, and more.

The materials provide graphic organizers throughout the lesson that will provide support for visual learners. There is also a graphic organizer at the end of the unit that accompanies a reflection document that students need to complete before moving on to subsequent chapters. The materials support developmentally appropriate instructional strategies in some instances. Within the seventh-grade lesson cycle, there are multiple opportunities for students to practice with teachers, peers, and themselves. The materials give clear guidance for activities to support guided, whole group, independent, and cooperative learning. The lessons use cooperative activities in the engage and explore sections of the lesson cycle. The lesson embeds small group instruction based on the results of practice and ends with independent practice and

assessment. However, the materials give limited guidance on how to facilitate practice opportunities. For example, in the guided practice trade a problem activity, teachers prompt students to write their own real-world multi-step problem that represents a one-step equation, but no guidance on how to facilitate the process within the materials.

The materials provide guidance to teachers on when to use a specific grouping structure based on the needs of students within the plan and present resources included with each lesson. For example, materials have students complete the “Quick Check” provided with each lesson to review and assess the skills presented in the previous lesson as they enter the classroom. This guidance for teachers is included in the “Launch the Lesson” section of the plan and present resource. Another example of instruction supports in the materials include lessons to support concept acquisition for students exhibiting a need for additional one-on-one support. Within the Teach the Concept tab of the “Plan and Present” resource, alternate teaching strategies specifically targeting Approaching Level learners are included with each lesson. The materials provide some support for flexible groupings such as small groups, whole groups, and individual learning. There are some routines and activities designed for large group instruction found within the materials. Lastly, the materials support multiple types of practices and provide some guidance and structures to achieve effective implementation. Within the seventh-grade lesson cycle, there are multiple opportunities for students to practice with teachers, peers, and self.

The materials give clear guidance for activities to support guided learning, whole group learning, independent, and cooperative learning. For example, in a lesson on solving equations, the lesson uses cooperative activities in the engage and explore sections of the lesson cycle. The lesson embeds small group instruction based on the results of practice and ends with independent practice and assessment. Another example of an opportunity the materials give students to work with their peers is in the section entitled “Problem-Solving Projects.” Here, students can find a variety of projects that will allow them to apply the math they have learned throughout the text to real-life scenarios. Project 3, Stand Up and Be Counted, requires students, as a group, to study the U.S. Census and its many components. Students are also given the opportunity to collaborate with their peers in the “Investigate and the Analyze & Reflect” sections of the text.

In Lesson 6-5, Write Equations from Tables and Graphs, the materials provide alternate teaching strategies such as students practicing solving the equations with a partner. One student should solve for  $y$  when  $x$  is 0, and the other should solve for  $x$  when  $y$  is 0, then they reverse the roles. Students check to see that they both have the same intercepts when they are finished. Throughout the materials, teachers can find ways to select appropriate strategies based on student needs by referring to a variety of designations. Specifically, each lesson has examples that are differentiated for students based on the level of understanding; however, a specific outline for selecting strategies is not provided.

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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 (EL) to meet grade-level learning expectations. Throughout the lessons, the materials include accommodations for linguistics (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency and provide scaffolds for English Learners. In addition, 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).

Evidence includes but is not limited to:

The materials include accommodations for linguistics that commensurate with various levels of English language proficiency. The English Language Learners (EL) Guide Book G, included in the chapter overview of the tools section in the Teachers Edition of most chapters, includes various linguistic accommodations for students who are learning English, particularly regarding their level of English language proficiency within each chapter. For example, the "Language-Free Math Inventory" assesses the mathematical ability of incoming EL students at the previous grade level, and each student takes it independently. This assessment includes relating fractions, decimals and percents, prime factorization, fractions and decimals on a number line, adding, subtracting, multiplying and dividing decimals, etc. The results will reveal which students may need remediation.

The English Language Learner's Guide provides a section titled "Facilitating Language Growth Across the Stages of Language Acquisition." In this section, teachers are provided with a guide for identifying stages of language acquisition. It breaks it down into stages and student

behaviors and then provides teachers' behaviors and strategies. At the Beginning Level, stages and student's behaviors are broken down into preproduction and early production. In addition, within each lesson, the materials contain additional activities for English Learners.

The materials also provide scaffolds for English Learners. The materials contain research-based scaffolds within the "English Language Learner's Guide." Within this guide, professional development cites several research papers. Scaffolds include but are not limited to simplified language, activation of prior knowledge, multiple modalities instruction, sheltered vocabulary, various ways to show understanding, and graphic organizers. The "Vocabulary tab" in the chapter overview resource includes a vocabulary activity labeled with the EL. During this activity, the materials prompt teachers as they proceed through the chapter to introduce each vocabulary term using the following routine, "Ask the students to say each term aloud after you say it." The materials also encourage strategic use of students' first language as a means to develop linguistic, affective, cognitive, and academic skills in English.

The materials include an English-Spanish glossary of important, or difficult, words used throughout the textbook. Terms and definitions are presented in English and Spanish. Teachers are encouraged to activate EL prior knowledge and cultural perspective. Teachers can ask students to demonstrate rhythms, kinesthetic actions, and techniques they were taught to use in their native culture to solve math problems. In the English Learners Guide, there are Strategies for EL Success. The guide lists six key strategies to employ during EL instruction that can make teaching easier and learning more efficient: activate EL prior knowledge and cultural perspective, use manipulatives, realia, and hands-on activities, create a risk-free environment, organize curriculum for ELs, utilize a variety of methods and representations, and anticipate common language problems.

The materials also provide scaffolds for English Learners. The materials contain research-based scaffolds within the "English Language Learner's Guide." Within this guide, the professional development cites several research papers. Scaffolds include but are not limited to simplified language, activation of prior knowledge, multiple modalities instruction, sheltered vocabulary, various ways to show understanding, and graphic organizers. The Vocabulary tab in the Chapter overview resource includes a vocabulary activity labeled with the EL. During this activity, the materials prompt teachers as they proceed through the chapter to introduce each vocabulary term by asking the students to say each term aloud after you say it.

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

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

## Meets 2/2

The materials include a cohesive year-long plan that is vertically aligned to build students' mathematical concept development. Throughout the curriculum, the materials provide review and practice opportunities of mathematical knowledge and skills.

Evidence includes but is not limited to:

The materials include a cohesive, year-long plan to build students' mathematical concept development. The content plan is cohesively designed to build upon students' current level of understanding with clear connections within and between lessons and grade levels. Each chapter of the materials includes a mathematical background section that shares a plan for instruction that spans the course of the year. This plan includes a vertical alignment reference table and a TEKS correlation document that shows how activities align to the TEKS and, both directly and indirectly, to concepts and skills outlined for students in preceding and subsequent lessons. For example, in Chapter 4, Apply Proportionality to Geometry, the vertical alignment table specifies that students should have proficiency in TEKS 7.4 regarding representing and solving problems involving proportional relationships before beginning the work of the chapter, which references TEKS 7.5 regarding the use of geometry to describe or solve problems involving proportional relationships. The guide states that after achieving proficiency in both TEKS 7.4 and 7.5, students will later work with TEKS 7.6 regarding the use of probability and statistics to describe or solve problems involving proportional relationships. The reference tables, however, do not always align with the relevant standard from the previous grade level or reference the following year. The year-long plan of content delivery includes a table with each chapter and the suggested number of days. The program is 146 days with an additional 20 days that includes five days of assessment review and 15 days of problem solving projects.

The materials provide some review and practice of mathematical knowledge and skills throughout the span of the curriculum. For example, all chapters are equipped with a Mid-Chapter Check as well as a Chapter Review at the end of each chapter. The Chapter Review consists of a vocabulary check that reviews important vocabulary throughout the chapter, a key concept check that uses foldables to review pertinent information, a multi-step problem-solving opportunity, and a reflection. In Chapter 2 Review, Proportional Relationships, students begin with learning unit rates, moving on to graphing proportional relationships, and finally ending with the constant of proportionality. Each lesson allows students to practice the concept and skills through different modalities such as teacher-led examples, guided practice, independent practice, and multi-step problem solving. The problems students practice are aligned to the current TEKS or skills being covered. Additionally, embedded in each lesson are review tools such as the Quick Check, Cooperative Learning Activities, Ticket Out the Door, and Self Check Quiz. For example, within a Ticket Out the Door activity in Chapter 7, students demonstrate their understanding by solving a multi-step equation. Review and practice materials can also be found in the provided teacher resources. Teachers have the option of using a standardized test practice that aligns with the TEKS. Teachers can also access Key Concept Checks for students through the e-solutions application.



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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 year's worth of math instruction, including realistic pacing guidance and routines.

## Meets 2/2

Throughout the lessons, the 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. They also include supports to help teachers implement the materials and resources and guidance to help administrators support teachers in implementing the materials as intended. In addition, they include a school year's worth of math instruction, including realistic pacing guidance and routines.

Evidence includes but is not limited to:

The 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. The materials include a scope and sequence for instruction within the program overview included in the "Plan and Present" resource of the materials. This scope and sequence shows clear alignment to the Texas Essential Knowledge and Skills for Math Grades 6–8 and outlines the sequence of instruction towards the end of year outcomes and includes an organized chart which clearly delineates which knowledge and skills are introduced and which are reviewed within each lesson.

Furthermore, each chapter overview provides a condensed scope and sequence showing the order of topics for each component (lesson, hands-on lab) in the chapter and the length of time given towards their completion. At the beginning of the text, the students are provided with a breakdown of all the TEKS for the unit, and they are able to track their progress as they travel

throughout the text. The scope and sequence detail the order in which content is presented. This is the same order of the chapter and lesson. The “Mathematical Background” section in the “Chapter Content” tab of the chapter overview included with each chapter of the materials include guidance for teachers on the scope and sequence and describe how the essential knowledge and skills build and connect across grade levels. The materials also include supports to help teachers implement the materials as intended.

The materials provide teachers with a professional development section to support their understanding of how the components of the materials were intended to be used. Specifically, in this section, teachers will find implementation support, a professional learning community kit, sketchpad support, Dinah Zike/Foldable videos, STEM videos, on-demand webinars, and white papers. The implementation support will guide teachers in their understanding of how to use their online planning tools, how they can identify and locate the TEKS in the resource, use of the engagement tools (such as collaboration activities, differentiation activities, activities for EL students), and how to use the online digital and print instruction. The professional development includes multiple videos on how to implement these materials. Other resources include videos, animations, personal tutors, and more. The materials contain planning tools such as recommended lesson plans, a planner, and a professional development section.

The materials include resources and guidance to help administrators support teachers in implementing the materials as intended. The materials include support for teachers to implement the materials as intended, including information in understanding appropriate learning environments, structures, and approaches that support the acquisition of mathematical knowledge. This support can also guide administrators in supporting teachers to implement the materials as intended. The materials contain printed and digital 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. This plan includes pacing for 166 school days and includes a breakdown of pacing and days for each of the following: The Mathematical Processes Handbook, Chapters 1–11, Texas Assessment and Problem-Solving Projects. Through the access of the teacher plan, administrators will be able to recognize the suggested best instructional practices and arrangements in a middle school classroom.

The materials also include a school year’s worth of math instruction, including realistic pacing guidance and routines. Beyond mapping out the number of days for each lesson and unit leading up to the state assessment, they also provide projects for students to complete after the assessment has been done. In the event that teachers have students complete the activities specifically outlined within the lesson, the materials include additional activities for differentiation, chapter projects, STEM projects, resources (such as extra practice), and enrichment. For example, in the Plan and Present Section, the Chapter Overview provides Chapter Contents and Suggested Pacing for each chapter, which continues for a full year of classroom instructions. Hands-on lessons and reviews are half-day lessons, while traditional lessons have a pacing of one day. The materials also include a full day of review and testing for each chapter. The plan includes pacing for 166 school days and includes a breakdown of pacing

and days for the Mathematical Processes Handbook, Chapters 1–11, and Texas Assessment and Problem-Solving Projects. The instructional pacing is realistic at the lesson and chapter level.

In Chapter 2, Proportional Relationships, the Mathematical Background for Lessons 1 through 3 states in previous grades, students learned about ratios, rates, and how to represent them. Here, students will calculate and convert unit rates from mathematical and real-life situations. The vertical alignment highlights what happens in previous grades, what the students are working on now, and what they will be expected to learn next.

In Lesson 3-2, administrators would be able to recognize if teachers use the suggested strategy of “Numbered Heads Together.” Administrators would be able to determine if teachers are asking the guiding questions designed for each level of learner when they are teaching the concept. Administrators can also use the support provided by the white papers, such as the “Developing Academic Vocabulary” paper, which provides strategies for effectively teaching vocabulary students. Administrators will then be able to observe if these arrangements and practices are being used.

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

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

## Meets 2/2

Throughout the lessons, the materials provide guidance for strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression. In addition, they are designed in a way that allows LEAs the ability to incorporate the curriculum into district, campus, and teacher programmatic design and scheduling considerations.

Evidence includes but is not limited to:

The materials provide guidance for strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression. The materials also provide a suggested sequence of lessons within the overview of each chapter that considers the interconnections between the development of conceptual understanding and procedural fluency.

For example, in grade 7, the materials clearly delineate the order of units to ensure students learn about precursor concepts first. The materials also provide access to different tools at the chapter, lesson, and planner level to customize lessons. The materials provide a contents brief and pacing that outlines the order of the units and the key focal concept. This allows teachers to see the suggested order of the chapters based on the TEKS and the Mathematical Processes Handbook.

The units are arranged in an order that will teach skills that will be used in later units. For example, the grade 7 units are ordered so that students understand proportional relationships before applying proportionality to percents, geometry, and probability. The materials include guidance that supports areas aligned to the classroom in the form of providing pathways for students with varying abilities. Each chapter has a diagnostic test that helps the teacher determine if a student is Approaching Level, On Level, or Beyond Level. Each component of the lesson guide has structures in place to support the teaching of each level of student proficiency. For example, when the teacher is teaching the concepts, the materials provide a different set of question stems. Teachers also have additional differentiated tasks for each level of learner, as well as a different summative assessment at the end of the chapter. The materials map content in a sequential order to ensure students have prerequisite knowledge prior to higher-level learning.

In Lesson 6-2, students can participate in a Think-Pair-Share activity. The materials provide pacing calendars and customizable lesson plans that could be adapted to a variety of settings. There are various grouping options depending on student needs. This includes differentiated options based on ability and language. The program supports digital instruction allowing for things to be exported to Google Classroom and in-person instruction with print materials.

The materials are also designed in a way that allows LEAs the ability to incorporate the curriculum into district, campus, and teacher programmatic design and scheduling considerations. For example, the implementation support within the professional development resource of the materials supports teachers in understanding how to use the materials as intended. This information includes an “e-In-service” resource that contains guidance for teachers with online planning tools. This in-service provides teachers with answers to questions such as, “How do I pace print and digital instruction?” and “How can I differentiate instruction using print and digital resources?” Here, teachers can find videos and documents that will guide and support implementation. This tool provides advice on using the planning tools to change lessons and the teacher planner by editing content, adding or deleting resources, or creating brand new lessons. The online resource has everything that the textbook has, and more. It allows teachers to set up online discussions, create and administer tests, set up classes, and track assignments. The teacher guide in the plan and present section does reference tasks that are best suited for full class or small group instruction.

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

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

## Meets 2/2

The materials provide guidance on fostering connections between home and school. Throughout the lessons, the materials support development of strong relationships between teachers and families. In addition, they specify activities for use at home to support students' learning and development.

Evidence includes but is not limited to:

The materials support the development of strong relationships between teachers and families. Before beginning each chapter, the materials recommend that teachers send home the family letter and at-home activities for students to complete with their parents. The letter describes what students will learn in the chapter with key vocabulary words and activities parents can do with their students. The materials include both English and Spanish versions with chapter vocabulary, hands-on activities, and online activities. The materials also specify activities for use at home to support students' learning and development. The materials include online access to resources parents can use at home. Online materials include resources with each chapter that are easy to use on common devices and are related to current skills. There are printable versions of worksheets, the eBook, family letter and at-home activities, virtual manipulatives, and the "eToolkit." The materials also provide electronic access to an "eglossary," where students or parents could select to view the terms in English or Spanish. By searching Spanish in the "Plan and Present" section, teachers will find access to the entire textbook in Spanish. They could download specific sections to be sent home as support for Spanish-speaking parents.

The Family Letter for Chapter 2, Proportional Relationships, has a hands-on activity that also provides parents and students with activities to do at home. For example, the materials suggest for families to keep a record of the length of time you spend doing homework every day for a week. Students make a table showing the number of the day and the number of hours, graph the ordered pairs, and determine the rate of change from Monday to Friday.

Students are asked if their graph is a constant rate of change and if the graph shows a linear relationship.

In Chapter 9, *Statistics and Sampling*, the Real-World Activity states, “Have 2 number cubes and a pencil. Roll the number cubes and add the resulting two numbers. Write down the sum. Repeat the first two steps 10 more times. Add the resulting eleven numbers and divide by 11. The answer is called the mean of the numbers. Order the sums from least to greatest and choose the middle number. The number you chose is called the median of the numbers.”

There are also options for video tutorials to be viewed in Spanish, such as in Lesson 5-3, *Represent Sample Spaces*. Students and parents have access to ALEKS, a student account home for K–12 students. Students and parents can access assignments for their current active class.

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

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

## Meets 2/2

The visual design of student and teacher materials (whether in print or digital) is neither distracting nor chaotic. Throughout the lessons, the materials include appropriate use of white space and design that supports and does not distract from student learning. In addition, pictures and graphics are supportive of student learning and engagement without being visually distracting.

Evidence includes but is not limited to:

The materials include appropriate use of white space and design that supports and does not distract from student learning. For example, the pages of the math student book have large print, simple graphics, and plenty of white space. Tables, charts, and visuals included are clear and concise, without being distracting. The student edition provides adequate workspace for students to solve problems. On pages 392 and 393, for example, there is a designated workspace in the margins. If there is not designated workspace in the margins, there is adequate workspace on the page itself. The materials are consumable, thus allowing students to remove the page for ease of use. All graphics, artistic, and mathematical are easy to view and understand.

The text is filled with an abundance of visual aids that supports student learning. The beginning of each chapter is equipped with a graphic novel representation of a problem. Students get to read the problem and answer it later on in the chapter. The headings for each lesson are bold, have a distinct color scheme, and are located at the top of the page. Students are able to distinguish between Lessons and other activities throughout the chapter. The text comes equipped with lines for students to capture their answers and a Work Zone on the side of specific pages, where they can work out their problems.



The student e-book is set up in a logical sequence with scaffolds to increase ease of use. These include a table of contents, glossary, comics for engagement, tools, reading materials, and an index. Chapter overviews contain mathematical background within the “Chapter Content” tab. The mathematical background makes clear references to other lessons and ancillary materials that can be used to support differentiated learning. In Chapter 4, Apply Proportionality to Geometry, the materials discuss the use of proportions and/or scale factors models to solve problems involving scale drawings.

The materials provide a teacher's edition that is virtually identical to the student's textbook. In addition, the materials provide teachers with a digital platform title Plan and Present. There each lesson will be broken down into components such as TEKS, “Lesson Launch,” “Teach the Concept,” “Practice and Apply,” “Multi-Step Problem Solving,” “Additional Activities for Differentiated Instruction,” and “Assessment.” In each section, teachers are provided with specific materials to support learning. These materials include videos, blackline masters of student worksheets, virtual manipulatives, and step-by-step tutorials.

The “Plan and Present” resource is broken down into sections that are then further broken down into subsections using a drop-down arrow. Teachers are able to navigate the subsections quickly due to the color-coding, reference tables, and graphics available within the content. Lesson guidance has designated areas for the TEKS, Lesson Launch, teaching the concept, practice, multi-step problem solving, additional differentiated activities, English Learning activities, assessment, and sketchpad resources. The implementation support within the “Professional Development” resource of the materials consistently includes a place for instructional support to aid teachers in planning and implementing lessons. This support includes an “eInservice” resource that includes guidance for teachers with online planning tools, TEKS/Texas assessments, “Engagement and Collaboration” sections, integrating print and digital instruction, and program assessment resources.

The pictures and graphics are also supportive of student learning and engagement without being visually distracting. Most often, the pictures are related to a real-world problem or task that students are currently engaged in. Lessons contain graphic organizers, usually in the form of foldables and guided notes. The resource provides real-world problem solving graphic novels. The stories are written in a comic strip format, are easy to read and grade-level appropriate. The book of graphic novels that are linked are in black and white; however, the graphic novels included in the student textbook are vibrant and in color. Also, throughout the materials, any tables, number lines, or pictorial models are clear and easy to read. 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. Display charts such as number charts and number lines are also clear and easy to read.

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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 include technology or online components that are appropriate for grade-level students and provide support for learning. Throughout the lessons, technology aligns to the curriculum’s scope and approach to mathematics skill progression. In addition, the technology supports and enhances student learning as appropriate, as opposed to distracting from it, and includes appropriate teacher guidance.

Evidence includes but is not limited to:

The technology in the resources aligns with the curriculum’s scope and approach to mathematics skill progression. Materials contain an eBook with a “Go Online” option for students. This option contains direct links to watch lesson animations and videos, worksheets, vocabulary, a personal tutor, tools, and checks for understanding. Each option includes a pictorial reference that appears in various places throughout the lessons to allow students to interact digitally with tasks. In Lesson 7-4, Solve and Write Two-Step Equations, the Launch the Lesson: Real World at the beginning of the lesson includes a pictorial reference for students to watch the lesson animation on solving two-step equations.

The technology components align with the scope and sequence of the materials. The materials provide recommendations for when to use the technology components through the “Plan and Present” section. When teachers expand each section of the lesson, any suggested technology components will be clearly labeled along the right-hand side. It will have the suggested videos, tutorials, and whether or not virtual manipulatives may be appropriate. When appropriate, the lesson will have an expandable section for “Geometers Sketchpad.” Also, the bottom of the textbook pages will have links to the technology components that support instruction at that specific time in the scope and sequence. If something doesn’t apply, there will not be a link.

Technology icons are placed strategically through the chapter that provides students with an additional reference as they matriculate throughout the resource. Students can watch videos and complete activities as needed. Virtual manipulatives are included to help students see the material in a hands-on way using technology. The materials provide recommendations for teachers when to utilize technology with students and if there is a time during lessons that the technology would enhance student learning within most lessons. This is outlined in the “Teach with Tech” section under the “Teach the Concept” tab of the “Plan and Present” resource. In Lesson 6-3, Slope, the “Teach with Tech” prompts teachers to use the “Interactive WhiteBoard” to display a graph of a linear relation and have a student use the highlighter tool to identify two points and trace the rise and run.

The technology also supports and enhances student learning as appropriate, as opposed to distracting from it, and includes appropriate teacher guidance. The digital Student Edition, eBook, of the math book is age-appropriate to sixth through eighth-grade students. Students’ pages have navigation buttons for digital copies of the student text, tutorial videos, and online skills practice. For example, the student edition contains a “Quick Check” at the beginning of each chapter, which includes a “Chapter Readiness Quiz” where students may go to practice and receive feedback. In Chapter 7, Equations and Inequalities, students practice writing algebraic expressions.

The materials provide teachers with sufficient guidance on how to utilize the technology components provided. The implementation professional development platform provides teachers with a section on how to use the online planning tools, as well as a section on how to integrate print and digital instruction. There is also a section provided within the professional development section of the resource for teachers to seek help in implementing the “Geometer’s Sketchpad” tool. The help section also provides teachers with video tutorials on using the components of the online teaching platform. For example, they can watch videos on how to create and manage their classes. The “Professional Development” section provides multiple videos that educate teachers on how to use technology with students. The materials give teachers appropriate and sufficient guidance on how to use technology with students and how to support students with technology use. There are several professional development resources for students and teachers on sketchpad and Texas Instruments Nspire and TI-84 tech labs.