HMH Education Company

Supplemental English Mathematics, 3

HMH Math 180 Texas Grade 3

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Supplemental	**9798202139468**	**Digital**	**Adaptive**

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	30	8	Flags Addressed	Not Applicable	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	21 out of 21	100%
2. Progress Monitoring	19 out of 19	100%
3. Supports for All Learners	36 out of 37	97%
4. Depth and Coherence of Key Concepts	16 out of 16	100%
5. Balance of Conceptual and Procedural Understanding	38 out of 38	100%
6. Productive Struggle	19 out of 19	100%

Breakdown by Suitability Noncompliance and Excellence Categories

SUITABILITY NONCOMPLIANCE FLAGS BY CATEGORY	IMRA REVIEWERS	PUBLIC	Flags NOT Addressed by November Vote
1. Prohibition on Common Core	6	0	0
2. Alignment with Public Education's Constitutional Goal	0	0	0
3. Parental Rights and Responsibilities	0	0	0
4. Prohibition on Forced Political Activity	2	0	0
5. Protecting Children's Innocence	0	0	0
6. Promoting Sexual Risk Avoidance	0	0	0
7. Compliance with the Children's Internet Protection Act (CIPA)	0	0	0

SUITABILITY EXCELLENCE FLAGS BY CATEGORY	IMRA REVIEWERS
Category 2: Alignment with Public Education's Constitutional Goal	0
Category 6: Promoting Sexual Risk Avoidance	0

IMRA Quality Report

1. Intentional Instructional Design

Materials support educators in effective implementation through intentional course and lesson-level design.

1.1 Course-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.1a	All criteria for guidance met.	5/5
1.1b	All criteria for guidance met.	3/3
1.1c	All criteria for guidance met.	2/2
1.1d	All criteria for guidance met.	2/2
1.1e	All criteria for guidance met.	2/2
—	**TOTAL**	14/14

1.1a – Materials include an alignment guide outlining the TEKS, ELPS, and concepts covered, with a rationale for learning paths across grade levels (vertical alignment) and within the same grade level (horizontal alignment) as designed in the materials.

HMH *Math180* includes an *Alignment Guide* for grade 3 Texas Essential Knowledge and Skills (TEKS), English Language Proficiency Standards (ELPS), and concepts that lead toward algebra readiness. Under a specific TEKS or ELPS standard in the *Math 180 Alignment Guide* to grade 3 TEKS and ELPS, activities related to a particular TEKS or ELPS standard can be accessed by clicking a link.

1.1b – Materials include an implementation guide with usage recommendations and strategies for effective educator use in various contexts, such as just-in-time supports, advanced learning, or as a course.

Math 180 Grades 3–5 includes a *Program Guide.* This guide offers various implementation options, such as rotations, whole-group lessons, and shortened periods. Using adaptive learning technology, the program aims to provide each student with a personalized experience every time they log into their dashboard. This experience includes situated instruction, problem-solving, and skill-focused digital games. Each series contains a "Teaching Guide" that offers instructional strategies and optional lessons for small-group practice. The grade 3 "Multiplication Block Teaching Guide" highlights high-level practice patterns within each lesson to support personalized instruction in small groups based on students' proficiency.

1.1c – Materials include a TEKS correlation guide with recommended skill entry points based on diagnostic assessment results.

HMH Ed has an Assessment and Standards Report dashboard that gives results from the mSkills assessments for each of the blocks in a series. The results are correlated to the TEKS. Educators can look at the TEKS and obtain a report on students who are below, on, and above level for a TEKS in a "Mathematics Domain" covered in *Math 180.* These diagnostic results offer recommendations for skill entry points for TEKS covered in the materials.

1.1d – Materials include protocols with corresponding guidance for unit and lesson internalization.

Math 180 Grades 3–5 includes protocols with corresponding guidance for lesson and unit implementation. The "Teaching Guides" provide unit internalization by previewing the unit with key standards, unit objectives, vocabulary, materials, and assessments, as well as providing the learning progression. Also included are activities for the student to complete within the learning progression, denoted as the Do Now, Guided Practice, Practice in Pairs, Exit Ticket, and High-Leverage Practices to challenge all levels with the teacher in small groups. The "Teaching Guides" also have a process for educators to thoroughly understand and prepare to teach lessons with annotations, check for understanding, and success criteria. "Professional Learning" sections are provided in each series, explaining the learning progression and giving explanations and examples of strategies taught.

1.1e – Materials include resources and guidance for instructional leaders to support educators with implementing the materials as designed.

An "All About HMH *Math 180*" document is available in the "Program Support" section on the HMH Ed Dashboard that provides an overview of the program and instructions on how to use it in different classroom settings. The *Program Guide* offers suggested instructional time frames that educators and coaches can choose to best fit the mathematical instructional day for their students and campus. It also includes multiple data analysis tools, such as mSpace Progress Monitoring and the mSkills assessment. The guide also explains how to read and interpret testing data. Instructional leaders can use these resources to support team meetings and coach educators on how to continue using the materials as intended.

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	This guidance is not applicable to the program.	N/A
1.2b	All criteria for guidance met.	5/5
1.2c	All criteria for guidance met.	2/2
—	**TOTAL**	7/7

1.2a – If designed to be static, materials include detailed lesson plans with learning objectives, teacher and student materials, lesson components with suggested timeframes, and assessment resources aligned with the TEKS and ELPS.

This guidance is not applicable because the program is not designed to be static.

1.2b – If designed to be adaptive, materials include detailed lesson overviews with learning objectives, lesson components with suggested timeframes, and assessment resources aligned with the TEKS and ELPS.

Each lesson in *Math 180* contains objectives that are not explicitly stated in the language of the TEKS in the "Teaching Guide"; however, the *Alignment Guide* gives the TEKS and ELPs for lessons within the content for all grade levels 3–5. Every lesson within a block of a series begins with a ten-minute introductory video, followed by segments such as discussion, group lesson, guided group practice, partner practice, and an independent exit ticket aligned with the lesson's objective. The *Program Guide* offers a "Flexible Implementation Model" for different times and days for math lesson blocks that explain the "Blended Learning Experience." By searching the *Math 180* "Dashboard for Teacher Resources," educators can browse materials by TEKS number.

Materials do include guidance on the ELPS expectations for assessments. The assessments align with the TEKS and ELPS within the scope of the *Math 180* program. The *Math 180 Alignment Guide for Grades 3–5* TEKS and ELPS lists the ELPS and TEKS numbers for lessons in a series. The "Teaching Guides" for each series include a language goal with mathematical thinking that is aligned to the ELPS. Some lessons in a series feature a "Language Support at a Glance" to assist multilingual learners. This document details the ELPS language expectations and offers strategies that leverage linguistic assets and differentiate by language for all proficiency levels included in the ELPS.

1.2c – Materials contain support for families in Spanish and English for each unit, with suggestions on supporting the progress of their student(s).

Materials include strategies for supporting students and providing progress updates for families in English and in Spanish. *Math 180* for grades 3–5 communicates with families through letters in English and in Spanish that contain detailed suggestions on how they can support their students' understanding

of the concept focus and procedural skills in each block of a series. In the letter from the "Multiplication Series," the teacher outlines instructional goals for both the teacher and students related to the procedural skill of multiplication. A list of strategies is provided, such as learning to use the factors of a number, with detailed graphics and mathematical language to describe the procedure being used.

Math 180 provides a "Math 180 Progress Update" to support families in English and in Spanish for each lesson in a topic within a series regarding their student's progress.

2. Progress Monitoring

Materials support educators in effective implementation through frequent, strategic opportunities to monitor and respond to student progress.

2.1 Instructional Assessments

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.1a	All criteria for guidance met.	2/2
2.1b	All criteria for guidance met.	2/2
2.1c	Materials include assessments. Assessments are not designed to be digital assessments or digital assessments are not designed for print. The materials do not include content and language supports that educators can enable or disable to support individual students.	Not Scored
2.1d	All criteria for guidance met.	4/4
2.1e	All criteria for guidance met.	4/4
—	**TOTAL**	12/12

2.1a – Materials include the definition and intended purpose for the types of instructional assessments.

Math 180 provides a Roadmap that gives a description of the tool, a purpose for the tool, and informs the educator as to what is being assessed. The intended purpose of the assessment is identified under the "description and purpose" column of the Roadmap.

The "Teacher's Corner" in *Math 180* has a "Formative Assessment" section in *Program Support* where explanations are given as to how to incorporate the various types of assessments before, during, and after instruction. Explanations are given for instructional routines, including strategies such as Show of Thumbs and Answers Up to be used by teachers during lessons to get real-time data from all students to gauge understanding while working through the lesson. These instructional routines allow the educator to adjust the instruction when needed.

Each lesson within a block of a series begins with a Do Now, which assesses student knowledge to provide educators with the ability to both gauge progress and guide their instructional decisions. In the "Teaching Guide" for the "Multiplication and Division Series," each Do Now provides educators with the purpose. For example, "Develop Number Sense," students look for a pattern and structure as they think about the number ten, "which enables students to share their responses, allowing educators to determine which students require more support and which students need extensions." The lesson ends with an Exit Ticket that students complete individually. The teacher uses these tickets to assess understanding and plan differentiated instruction or interventions as needed.

2.1b – Materials include guidance to ensure consistent and accurate administration of instructional assessments.

The *Math 180 Program Guide* offers clear guidance for consistent and accurate administration of the mSkills assessments found at the end of each instructional block. Reminders to review the Mindset Strategy, Card Sort, Sum It Up, and mSkills Strategy lessons with students before assigning the assessment are included. Detailed instructions on how to assign the mSkills assessments to students are provided.

Each mSkills assessment has 20 questions of various item type formats that could be completed within a class period or within a testing window as directed by the teacher to allow students to work at their own pace. Though the time it takes to complete the assessment will vary, most students complete the test in 45–60 minutes. These clear guidelines allow educators to receive the assessment with the same instructions and testing environments, leading to more reliable and comparable results.

2.1c – Digital assessments include printable versions and accommodations, including text-to-speech, content and language supports, and calculators, that educators can enable or disable to support individual students.

The materials do not include accommodations for content and language supports to be enabled or disabled to support individual students.

Text-to-speech and calculator accommodations will be enabled in all program assessments. Each of the stated accommodations will be able to be delivered to individual students or the entire class in all program assessments.

There are PDFs available for the Baseline 1 and Baseline 2 "Digital Assessments" that are printable. The mSkills assessments are provided in a printable version and are identical to the digital assessment. For example, the "Multiplication and Division Series" contains a printable version of the mSkills "Digital Assessment" available to students online. The mSkills "Digital Assessment" can also be viewed on the HMH Teacher website by clicking on categories and then clicking on assessments.

By going to class settings on HMH Ed, the teacher can enable or disable the calculator for an individual student or the class to use with all digital material.

2.1d – Materials include diagnostic assessments with TEKS-aligned tasks or questions, including interactive item types with varying complexity levels.

Math 180 includes diagnostic assessments with TEKS-aligned tasks or questions, including interactive item types with varying levels of complexity. In grade 5, items categorized as Depth of Knowledge (DOK) 1: "Recall" focus on basic recall of mathematical facts or procedures. For instance, the example “Which fraction is equivalent to 6/8?” requires students to recognize equivalent fractions. The example “Which is

another way of writing 3 ÷ 2?" asks students to identify a fraction that represents a division expression. The example "Which temperature is the lowest?" involves a simple comparison of numerical values.

Items under Shape DOK 2: "Skills and Concepts" require students to apply models or procedures in familiar contexts. The example, "Pedro planted 6 rows of flowers. Each row had 18 flowers. Which shows how many flowers did Pedro plant?" applies multiplication in a real-world context. Another example, "Jamila had 12 pencils. She lost 9. What fraction of her pencils did she lose?" involves subtraction and an understanding of fractions. The example, "Which model represents the sum of 0.5 + 0.29?" asks students to interpret a visual model that represents a decimal sum.

Items labeled "Shape DOK 3: Strategic Thinking" require reasoning across multiple steps or concepts. The example, "A car wash collected $320 to wash 25 cars and some trucks. Cars cost $8 and trucks $10. How many trucks were washed?" involves setting up and solving a multi-step word problem using reasoning about operations. Another example, "A bakery made 140 buns. A restaurant bought 80. The rest were bagged in groups of 4. How many bags?" requires subtraction and division, along with reasoning about quantities.

Math 180 mSkills Interactive Assessments offers multiple interactive item types, such as text entry, drag-and-drop, multi-select, and multiple-choice questions.

2.1e – Materials include a variety of formative assessments with TEKS-aligned tasks or questions, including interactive item types with varying complexity levels.

Math 180 formative assessments have more than two levels of complexity, from DOK 1 to DOK 3, and have more than two unique interactive item types of questions, such as ordering, select all that apply, and fill-in-the-blank.

mSkills and the *Math 180* formative assessment include many unique interactive item type questions on its digital platform, like "Ordering," "Select all that Apply," and "Fill-In the Blank." For example, question 14 of the "Multiplication and Division Block 1 mSkills Assessment," students "Drag the tiles to order the multiples of 10 from least to greatest value."

The questions in the mSkills Block 1: "Addition, Subtraction, and Place Value" assessment align with DOK Levels 1 and 2. Most questions fall into the recall and reproduction DOK Level 1. These questions ask students to perform basic computations with no need for interpretation or strategic thinking. Examples of DOK Level 2 questions are number 7: "Which expressions show steps to make 10 to solve" and number 13: "Break apart the second added to make 10 because students are applying a strategy and selecting among multiple strategies (breaking apart numbers) or representations (using an open number line)." DOK Levels 3 and 4 questions are not present in this assessment.

Throughout the *Math 180* learning pathways, students are provided with multiple, scaffolded practice and assessment opportunities that are purposefully aligned to the TEKS. These activities progress in

complexity, encouraging students to apply, analyze, and synthesize knowledge in ways that demonstrate deep understanding. Formative checks, Performance Tasks, and real-world problem-solving scenarios ensure students engage meaningfully with TEKS-aligned content.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	All criteria for guidance met.	3/3
2.2b	All criteria for guidance met.	1/1
2.2c	All criteria for guidance met.	2/2
2.2d	This guidance is not applicable to the program.	N/A
2.2e	All criteria for guidance met.	1/1
—	**TOTAL**	7/7

2.2a – Instructional assessments include scoring information and guidance for interpreting student performance, including rationale for each correct and incorrect response.

The *Program Guide,* under the "Assessment, Progress Monitoring & Data" section, instructs educators on how to interpret student performance on assessments, reflect on levels of understanding and/or proficiency, and provide direction on what students need next.

The "Assessment Report" displays results from the mSkills assessments for the blocks assessed in a class. Results from this report are used to monitor student learning and provide ongoing feedback. Scoring provides a detailed breakdown of class and individual performance for the teacher. The "Assessment Report" displays mSkills scores for all students. mSkills assessment results can be used to determine instructional pacing and to identify topics and objectives where students experienced challenges; "may confer with students about results, adjusting goals." However, materials do not include a customization to view results using the TEKS.

Results from the "Standards Report" evaluate student performance against state standards to help inform small-group instruction. The "Standards Report" can be customized to provide guidance on determining students' strengths, weaknesses, and/or gaps; common misconceptions; and setting performance goals in an IEP.

Math 180 has Performance Tasks that assess the application of learned skills, reasoning, planning, analysis, judgment, and creative thought. A scoring rubric provides clear guidelines for interpreting student performance and responses.

Each mSkills assessment has an answer key that provides the "Assessment Rationales." These answer keys include a brief explanation of why each answer is correct or incorrect. For incorrect answers, the material provides possible misconceptions.

2.2b – Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments.

Math 180 materials offer educators guidance on how to use the student application to respond to trends in assessment performance. The "Teacher's Corner" tab includes a section under "Program Support." Within this area, there is an article titled "Program Activity Report (PAR) for Math 180." This article shows teachers how to analyze data to inform instruction. The "Program Activity Report (PAR)" can be customized by teachers to track class or individual student performance in the student application. The materials also provide instructional guidance for tasks and activities aimed at developing various skills, as identified by assessment data.

The *Math 180* has a pathway for students to use based on performance data. Once students are placed in a series based on assessment data, they proceed to the "Zone" menu, which displays the three zones, and the "Brain Arcade" students will work in as they progress through a block. Students must complete specific activities within a particular Zone to unlock access to other zones. They go from the "Explore Zone," where they view the anchor video and complete a simulation before they can go to the "Learn Zone" to complete tasks, before finally moving to the "Success Zone." Once in the "Success Zone," students use their problem-solving abilities to apply learned concepts and skills.

2.2c – Materials include tools for teachers to track student progress and growth, and tools for students to track their own progress and growth.

The *Math 180 Program Guide* explains how teachers are able to track class and student progress and growth data over time in a data table. For Performance lessons, teachers can track the class needs and ensure that students' needs are being met. When evaluating the data from the student's view, the *Program Guide* states, "This personalized data is crucial for tailoring instruction to meet each student's unique needs and for tracking their progress over time."

HMH Ed is the educator dashboard that provides reports on student performance data on the different types of assessment, such as mSkills, and other student tasks. These dashboards have a "Class Overview" that tells educators how many students are considered "Not Yet" or "On Track." There is also a way to view individual student data to see how to specifically help students.

mSpace progress monitoring is provided throughout the lessons as a formative assessment tool. Multiple opportunities for quick checks allow teachers to track student progress and growth, such as in the Do Now, Practice, and Exit Tickets within each series and block.

Students can view their learning progress when they have a conference with their teacher, as the teacher shares with them the "Summary," "Performance," and "Brain Arcade" reports at the student level. Students do not have access to data trackers unless one is provided by their teacher. The *Math 180 Program Guide* stated, "Compare these results with a teacher-created student log that students use to track their work (optional)." However, the materials do include a student progress tracker, both in English

and Spanish, for each series and topic for students to check off if they are in the "Learn Zone" and can make it to the "Success Board Zone." Each series has a certificate that is to be provided to students upon completion of the specific series.

Math 180 does provide a student-friendly data tracker called "The Student Goal Setting Template," which is a reflection sheet that can be used with each assessment, allowing students to make note of their strengths and learning opportunities. The program encourages teachers to use the student-completed reflection sheets during one-on-one conferences with students to facilitate goal setting.

2.2d – If designed to be static, materials provide prompts and guidance to support educators in conducting frequent checks for understanding at key points throughout each lesson or activity.

This guidance is not applicable because the program is not designed to be static.

2.2e – If designed to be adaptive, materials provide frequent checks for understanding at key points throughout each lesson or activity.

The student application features adaptive assessments in each lesson that monitor understanding and adjust pacing and difficulty, and it provides differentiated practices to support skill growth. "Fast Track" allows students to quickly progress through a *Math 180 lesson* by solving three challenging problems; if they are unsuccessful, they return to the "Learn Zone" for additional practice. In the "Learn Zone," students receive guidance toward independent practice with visual aids and personalized feedback, working through 3–20 problems based on their performance.

In each series in *Math 180*, the lessons are laid out so that students complete a Do Now related to the lesson each time. Then, they see a worked example before having Guided Practice and a handful of practice problems before completing an Exit Ticket. These frequent checks for understanding allow the teacher to continuously have feedback to adjust the difficulty of tasks as the student progresses through the material.

Three CheckPoint days are built within each block, one after each topic is covered. Teachers can use the data to determine a student's need for a Boost or Stretch lesson. This system provides teachers with frequent checks for understanding throughout the lesson or activity, ensuring misunderstandings are addressed before they become barriers to learning and allowing for adjustments in the difficulty of the task as students progress.

3. Supports for All Learners

Materials support educators in reaching all learners through design focused on engagement, representation, and action/expression for learner variability.

3.1 Differentiation and Scaffolds

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.1a	All criteria for guidance met.	1/1
3.1b	All criteria for guidance met.	4/4
3.1c	All criteria for guidance met.	2/2
3.1d	The materials do not include content and language supports that educators can enable or disable to support individual students.	2/3
3.1e	All criteria for guidance met.	2/2
—	**TOTAL**	11/12

3.1a – Materials include explicit educator guidance for lessons or activities scaffolded for students who have not yet reached proficiency in prerequisite or grade-level concepts and skills.

The materials offer a video in the "Teacher Success Pathway" that provides clear guidance for teachers on lessons. Teachers are guided through the program, showing where ("Resources for Differentiation"), what (RDI Index and RDI Lesson), and how (teacher pathway video) to use the curriculum to support students who have not yet achieved proficiency.

Lessons feature a section called "High-Leverage Practices," designed to help teachers adapt and scaffold both language and activities for students needing additional support. For instance, in the "Multiplication and Division Series," the "High-Leverage Practice" encourages teachers to address common patterns in student thinking.

The "Learn Zone" is part of *Math 180's* online program with built-in algorithms that provide students with content, practice problems, and feedback based on their current level of understanding. The application gradually transitions students from guided to independent practice using visual models, corrective feedback, and support resources. The "Learn Zone" has four sections: "Think," "Try," Practice, and "Master."

3.1b – Materials include explicit educator guidance for language supports, including pre-teaching and embedded supports for developing academic vocabulary and unfamiliar references in text.

The *Program Guide* includes a section that provides pre-teaching support to educators to be implemented in each lesson during the Vocabulary Routine (VR). The VR explicitly provides teachers with consistent

directions to introduce new math vocabulary during the teacher-facilitated instruction. The *Program Guide* includes implementation tips, including reminders to pre-teach the vocabulary and definition on the teacher display using the routine button on the whiteboard, encourage the students to use the term in discussions, and use the terms consistently for repeated exposure. An online glossary is available in mSpace for teachers and students to use when needed.

To address educator guidance for support for unfamiliar references in text, *Math 180* has created a "Language at a Glance," and a "Spanish Academic Language" document for each series are included. The "At a Glance" document provides sentence stems and offers differentiation based on students' varying levels of language proficiency.

Within each series, lessons include "Language Goals" to be met. The teachers are provided with specific scripts to teach academic vocabulary. Students are then allowed to use the words in a variety of ways.

3.1c – Materials include explicit educator guidance for enrichment and extension activities for students who have demonstrated proficiency in grade-level and above grade-level content and skills.

The *Math 180* materials include Stretch lessons for students who have demonstrated mastery, as evidenced by the "Program Activity Report," and proficiency with above-grade-level content and skills. Students not identified as "Developing" or "Not Yet" are intended to use the Stretch lessons. A lesson in the "Multiplication and Division Series" requires students to complete a variety of patterns and has students explain their thinking regarding the strategy used to extend the created patterns. Challenges are included, such as "Students create their own problems. Then, students trade problems with their partner to answer the following questions: How did you make sure that your pattern increases in multiples? Did you use addition or subtraction in your pattern?"

Math 180 adaptive online applications, including the "Fast Track" and the "Success Zone," are extensions and enrichments for students on and above grade level. The guidance "Fast Track" automatically provides advanced learning paths for students who can answer three Master-level questions consecutively to skip to the next lesson. When students have mastered all of the "Learn Zone," they will unlock the "Success Zone," where they review the previous topic with a game board of choices.

Math 180 provides a video in the "Teacher Success Pathway" that provides explicit teacher guidance for enrichment and extension activities. Teachers are given explicit guidance as to where enrichment and extension activities are located ("Resources for Differentiation"), how to unfold the meaning of RDI Index and RDI Lessons and how (teacher pathway video) to use the *Math 180* material to help students who have demonstrated proficiency in grade-level and above-grade-level content and skills.

3.1d – Digital materials include accommodations, including text-to-speech, content and language supports, and calculators that educators can enable or disable to support individual students.

The materials do not include accommodations for content and language supports to be enabled or disabled to support individual students.

Text-to-speech and calculator accommodations will be available in all program assessments. Each of the stated accommodations will be able to be delivered to individual students or the entire class in all program assessments.

Math 180 digital materials guide educators through the "My Classes" tab and selecting "Class Settings" to enable or disable the calculator for the entire class and individual students; this allows the calculator to be used throughout the material.

3.1e – Materials include educator guidance on offering options and supports for students to demonstrate understanding of mathematical concepts in various ways, such as perform, express, and represent.

The *Math 180* "Teaching Guide" for "Multiplication and Division Series" includes educator guidance to offer varied options and supports for students to demonstrate their understanding of the "Commutative Property of Multiplication." The lesson plan has students use diverse methods, such as area models, skip counting, addition equations, and multiplication equations, to express five groups of seven. The lesson plan also guides teachers during discussions that allow students to express their understanding orally and through written reasoning, providing questions to drive the discussion. Guidance for using manipulatives and representations during the lesson is also given to allow students to rotate and compare the models, such as 5x7 and 7x5. The language support section guides teachers to explicitly connect math terms with representations and equations. Other support gives guidance in allowing students to work individually or in pairs, and a section called "Modify Tasks" has suggestions on how to simplify or extend problems if needed.

Math 180 materials contain rubrics for the Performance Tasks within each series for students to showcase their thinking. For example, in the "Multiplication and Division Series," "Block 3's Performance Task," "Organize a Book Drive," the rubric provides point explanations for students creating a dot plot and table correctly and for students providing correct responses determining that the number of schools that donated books is greater than the number of cities that can receive them.

Math 180 provides a Performance Task where students apply math skills and concepts to solve real-world, career-related tasks involving more abstract reasoning, completed at the end of each Block in a Series. The materials include educator guidance in both the "Teaching Guide" and the mSpace annotated

on how to allow students to demonstrate understanding by drawing models and using written explanations.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	All criteria for guidance met.	5/5
3.2b	This guidance is not applicable to the program.	N/A
3.2c	All criteria for guidance met.	3/3
3.2d	All criteria for guidance met.	2/2
3.2e	All criteria for guidance met.	2/2
—	**TOTAL**	12/12

3.2a – Materials include explicit (direct) prompts and guidance for educators to build knowledge by activating prior knowledge, anchoring big ideas, and highlighting and connecting key patterns, features, and relationships through multiple means of representation.

Math 180 provides educators with direct prompts and guidance for teaching students and activating students' prior knowledge in the Connect portion of every lesson. Block 3 of the "Multiplication and Division Series," Connect section, explicitly instructs teachers on what to say to students and how to reference learnings from Block 1.

The Teacher Display Tools include the Connect feature, with the specific example the teacher is prompted to discuss from the previous concept lesson. The pictorial representation allows the teacher and students to highlight and connect key patterns, features, and relationships. It contains visual models to support students in visualizing concepts and understanding how those concepts relate to other mathematical concepts and skills.

3.2b – If designed to be static, materials include educator guidance for effective lesson delivery and facilitation using various instructional approaches.

This guidance is not applicable because the program is not designed to be static.

3.2c – Materials include multi-tiered intervention methods for various types of practice and structures and educator guidance to support effective implementation.

Materials include a variety of methods and structures for intervention practice. For example, in the "Multiplication and Division Series," Block 1, Topic 1, Lesson 1, students start in a whole-group setting by watching an anchor video of real-life multiplication situations and making a list of items in equal groups. As the lesson continues, students work both in pairs and independently to solve guided practice problems. Each section is clearly labeled to help the teacher decide which structure to use during that part of the lesson.

The RDI Index provides explicit instructions and recommendations for teachers to effectively implement multi-tiered intervention on checkpoint days (after the fifth lesson in Topics 1 and 2 and after the mSkills Assessment in Topic 3). After reviewing "Program Activity Report (PAR)" data, teachers can create groups and choose assignments according to the students' learning needs. Stretch lessons are designed for Tier 1 students, and Boost lessons are designed for Tier 2 and Tier 3 students. The RDI Index also guides which lessons are intended for individuals, pairs, or small groups.

3.2d – Materials include enrichment and extension methods that support various forms of engagement, and guidance to support educators in effective implementation.

Math 180 includes a Performance Task at the end of every block. These activities are higher-level thinking activities where students have to insert themselves into real-world roles, providing great levels of engagement. The *Teacher's Guide* provides the instructions with explicit prompts that guide and support the effective implementation of enrichment and extension methods. For example, Block 1 of the "Multiplication and Division Series" has students acting in the role of a social media manager. The educator is provided multiple prompts to serve as a springboard to activate students' thinking.

The "RDI Guide" provides explicit instructions and recommendations for teachers to effectively implement interventions on checkpoint days, including how to choose enrichment (Stretch) and extension (Boost Focus) activities. CheckPoint days occur after the fifth lesson in Topics 1 and 2, and after the mSkills assessment in Topic 3. After reviewing "Program Activity Report (PAR)" data, teachers can create groups and choose assignments according to the students' learning needs. An example is provided to show teachers one approach.

3.2e – Materials include prompts and guidance to support educators in providing timely feedback during lesson delivery.

In the "Teaching Guide," teachers are provided with prompts to give when students may still have gaps. "If students do not distribute both parts of both factors, then demonstrate why they must multiply all parts with an easier expression like 3 x 7. Show 3 x 7 = 3 x (5 + 2)." These structured prompts enhance the educator's ability to deliver timely feedback, improve student engagement, and refine instructional practices, leading to more responsive teaching.

The *Program Guide* includes guidance on implementing instructional routines as informal assessments during discussions to adjust instruction and provide timely feedback after a task. Think-Pair-Share, Turn and Talk, Question Chains, Show of Thumbs, and Answers Up encourage active participation by all students, provide low-risk opportunities to engage in discussion and clarify misconceptions, give teachers insight into students' thought processes to gauge understanding, provide teachers an opportunity to adjust instruction at a point during the lesson, and give immediate feedback.

3.3 Support for Emergent Bilingual Students

An emergent bilingual student is a student who is in the process of acquiring English and has another language as the primary language. The term emergent bilingual student replaced the term English learner in the Texas Education Code 29, Subchapter B after the September 1, 2021 update. Some instructional materials still use English language learner or English learner and these terms have been retained in direct quotations and titles.

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.3a	This guidance is not applicable to the program.	N/A
3.3b	All criteria for guidance met.	4/4
3.3c	All criteria for guidance met.	1/1
3.3d	All criteria for guidance met.	8/8
3.3e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	13/13

3.3a – If designed to be static, materials include educator guidance on providing and incorporating linguistic accommodations for all levels of language proficiency [as defined by the English Language Proficiency Standards (ELPS)], which are designed to engage students in using increasingly more academic language.

This guidance is not applicable because the program is not designed to be static.

3.3b – If designed to be adaptive, materials include embedded linguistic accommodations for all levels of language proficiency [as defined by the English Language Proficiency Standards (ELPS)], which are designed to engage students in using increasingly more academic language.

Math 180 "Multiplication and Division Series" Block 3: "Language Support at a Glance" provides embedded linguistic accommodation for all levels of language proficiency. To assist students at Pre-Production and Beginning levels, explicit sentence frames are provided for educators to display, review, and practice chorally using gestures and visuals. The materials recommend increasing the complexity for Intermediate and High-Intermediate students by incorporating helping verbs and adding details from the problem with the base verb. Tasks include pre-selected partner discussions and evaluating problem solutions, encouraging students to use justifiable reasoning with academic language. Advanced students are encouraged to use precise math language in complete sentences and to assess and suggest revisions to incorrect solutions, explaining and justifying their answers orally and in writing.

The "Learn Zone" lets students toggle between English and Spanish and play the "Lesson Video" in Spanish. These features support students at the Pre-production, Beginning, Intermediate, High-Intermediate, and Advanced levels.

Each series includes a "Topic at a Glance" document, which lists language objectives and key academic terms. The materials support academic language development at all proficiency levels, focusing on speaking skills and correct terminology. In the "Multiplication and Division Series" for Block 1, the materials guide educators to help students at the Pre-Production and Beginning language proficiency levels use mathematical terms and review how to multiply two numbers. The guidance directs educators to read aloud using sentence frames and show visual representations to build academic vocabulary. The materials also suggest ways to support students who speak languages other than Spanish, such as Hmong, Korean, Portuguese, and Somali.

3.3c – Materials include implementation guidance to support educators in effectively using the materials in state-approved bilingual/ESL programs.

The "Teacher's Corner" in *Math 180* includes a "Discourse" section featuring video explanations of the "Language Development" materials, along with modeled lessons that demonstrate strategies like leading discussions, vocabulary building, and Think-Pair-Share. Each block within a series provides a "Language Support at a Glance" document to help educators implement the state-approved ELPS effectively, offering practical tips for scaffolding content and language development differentiated by language proficiency.

3.3d – Materials include embedded guidance to support emergent bilingual students in developing academic vocabulary, increasing comprehension, building background knowledge, and making cross-linguistic connections through oral and written discourse.

Math 180 materials use structured routines to help emergent bilingual students build academic vocabulary, comprehension, and background knowledge through oral discourse. For example, "Stronger and Clearer Each Time" prompts students to verbally refine mathematical ideas, while "Critique, Correct, and Clarify" guides analysis and revision of flawed explanations. These routines help students strengthen oral language skills and use academic vocabulary collaboratively. The "Three Reads" strategy further develops comprehension by guiding analysis of word problems through repeated, purpose-driven readings.

Materials promote cross-linguistic connections in oral discourse by encouraging students to use their home language to introduce math concepts. The "Language Support at a Glance" section suggests partnering with students who share a home language and guiding them to explain math using varied language structures, including connecting words aligned with ELPS 2C.

Students develop academic vocabulary and comprehension in writing through sentence stems and prompts throughout lessons. For example, students use "I used . . . because . . ." to justify strategies, with scaffolds supporting different proficiency levels. Advanced students compose full responses using precise mathematical terms.

Materials help students build background knowledge in written form by integrating vocabulary with visuals, interactive exercises, and adaptive scaffolds. For instance, the online glossary provides definitions, visuals, and bilingual support. Vocabulary is reinforced across lessons with terms such as *sum* appearing in different contexts, and digital tasks prompt students to match terms with definitions or scenarios. The materials do give guidance for cross-linguistic connections through written discourse in "Language Support at a Glance."

3.3e – If designed for dual language immersion (DLI) programs, materials include resources that outline opportunities to address metalinguistic transfer from English to the partner language.

This guidance is not applicable because the program is not designed for dual language immersion (DLI) programs.

4. Depth and Coherence of Key Concepts

Materials are designed to meet the rigor of the standards while connecting concepts within and across grade levels/courses.

4.1 Depth of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.1a	All criteria for guidance met.	2/2
4.1b	All criteria for guidance met.	4/4
—	**TOTAL**	6/6

4.1a – Practice opportunities throughout learning pathways (including instructional assessments) require students to demonstrate depth of understanding aligned to the TEKS.

Practice opportunities throughout learning pathways require students to demonstrate a depth of understanding aligned to the TEKS. Each series builds complexity in the materials presented, including in practice opportunities. For example, in the "Multiplication and Division Series," students begin with identifying equal groups, modeling with tiles, and labeling each group, such as 4 groups of 5. As the series continues, students use arrays and interpret products using the multiplication algorithm. Students use their understanding of multiplication to make connections to division by separating a total number of tiles into equal groups and labeling their work.

The Performance Task "Design a Mural," requires students to use area models and partial products to determine the amount of space needed for the mural. Students are provided with a chart to organize their thinking and problem-solving strategies.

4.1b – Questions and tasks, including enrichment and extension materials, increase in rigor and complexity, leading to grade-level and above grade-level proficiency in the mathematics TEKS.

Throughout the *Math 180* learning pathways, students are provided with multiple, scaffolded practice and assessment opportunities that are purposefully aligned to the TEKS. These activities progress in complexity, encouraging students to apply, analyze, and synthesize knowledge in ways that demonstrate deep understanding. Formative checks, Performance Tasks, and real-world problem-solving scenarios ensure students engage meaningfully with TEKS-aligned content. Resources for Differentiated Instruction (RDI) are provided for teachers to use during interventions (Boost lessons) to reinforce foundational skills with routine problems or as an extension (Stretch lessons) to challenge students with nonroutine problems to extend skills.

The Stretch Lesson: "Solve Complex Multiplication Problems" demonstrates a clear increase in rigor and complexity, supporting grade- and above-grade-level proficiency in alignment with the TEKS. The Stretch lesson supports grade-level mastery by engaging students through multi-step problem solving with tasks that involve comparing and equal-group multiplication problems to reinforce conceptual understanding of multiplicative comparison. The students are encouraged to both write equations and draw models for problems that emphasize the structure of multiplication and comparison rather than simply calculating answers. The lesson extends students beyond grade-level expectations through cognitive demand, strategy selection, and collaborative reasoning. Problems such as the number riddle require logical reasoning, algebraic thinking, and synthesis of multiple steps, which move students into higher-order problem solving. The Strategy Bank prompts students to evaluate and apply different problem-solving strategies, which aligns with the above-grade-level expectations.

4.2 Coherence of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.2a	All criteria for guidance met.	1/1
4.2b	All criteria for guidance met.	1/1
4.2c	All criteria for guidance met.	4/4
—	**TOTAL**	6/6

4.2a – Materials demonstrate coherence across concepts horizontally within the grade level by connecting patterns, big ideas, and relationships.

The *Math 180* Multiplication and Division Series "Teaching Guide" lists the learning progression and connections to other concepts in each lesson within a grade level. The Block 1, Topic 1 overview highlights the connections to prior and future lessons. For example, in third grade, the learning progressions list the current objectives (relate situations to multiplication, represent multiplication with models and expressions, calculate products of one-digit factors, and identify and extend multiplication patterns) that will lead connections with other grade-level standards (finding the greatest common factor and least common multiple of two whole numbers and evaluate expressions at specific values of their variables).

Within teacher- and student-facing materials, a "Why This Matters" section is included to provide context and relevance to the lesson being taught for the day. The "Multiplication and Division Series," Block 1, Topic 3, Lesson 1, contains the "Why This Matters Statement": "Multiplying by 10 and knowing basic multiplication facts are the two essential skills needed to find products of greater numbers."

4.2b – Materials demonstrate coherence vertically across concepts and grade bands, including connections from grade K–6, by connecting patterns, big ideas, and relationships.

The *Math 180* scope and sequence is built around a curriculum that enables students to progress toward grade-level standards and algebra readiness. The "Program Overview" has a concept map that demonstrates coherence vertically across concepts and grade bands, including connections from grades kindergarten–6, by connecting patterns, big ideas, and relationships. For example, in third grade in the *Math 180* "Multiplication and Division Series," the learning progression begins with the kindergarten–2 prerequisites of representing addition within 100 and using place value understanding and properties of operations to add, and leads to using place value understanding and properties of operations to perform multi-digit arithmetic in grade 5. *Alignment Guides* are available for each grade level within the "Teacher Materials." Using these guides, the teacher is able to determine connections made within the materials across grade levels.

Throughout the *Program Guide,* educators are presented with how the materials are designed to prepare students for the Algebra 1 course. As an adaptive program, students can move in and out of the series they are placed in with a predictable series structure to ensure students are successful.

4.2c – Materials demonstrate coherence across lessons or activities by connecting students' prior knowledge of concepts and procedures to the mathematical concepts to be learned in the current grade level and future grade levels.

The "Multiplication and Division Series Teaching Guide" lists the learning progression and connections to other concepts in each lesson within a grade level. The Block 1, Topic 1 overview highlights the connections to prior and future lessons. For example, in third grade, the learning progressions list the current objectives (relate situations to multiplication, represent multiplication with models and expressions, calculate products of one-digit factors, and identify and extend multiplication patterns) that will lead to connections with other grade-level standards (finding the greatest common factor and least common multiple of two whole numbers and evaluate expressions at specific values of their variables).

Learning progressions provide, at the beginning of each block within a series, coherence across lessons and activities. Students are required to build upon prior knowledge to continue to move through the Series and be successful. For example, as students work to model two-digit by one-digit multiplication, the educator guides them to decompose the larger factor into two smaller factors, such as 16, 10, and 6. This procedure is frequently drawn on through the materials for students to determine partial products, quotients, or sums.

In the "Multiplication and Division Series Teaching Guide," there is a "Block at a Glance" that overviews how each lesson builds upon the last one. For example, Block 1, Topic 1 is "Equal Groups in Multiplication." Within this Topic, students must identify equal groups, then interpret products, and then apply the commutative property before students reinforce multiplication facts with a game and build their mastery with problem solving. At the end of each block, students tie together all of their learning with a Performance Task that utilizes all of the skills learned within the block.

4.3 Coherence and Variety of Practice

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.3a	All criteria for guidance met.	2/2
4.3b	All criteria for guidance met.	2/2
—	**TOTAL**	4/4

4.3a – Materials provide spaced retrieval opportunities with previously learned skills and concepts across learning pathways.

Math 180 mSkills multiplication assessment revisits skills learned at the beginning of the lesson, those learned in the middle, as well as skills at the end of the lesson. This provides students with a spaced retrieval opportunity to revisit skills previously taught in a timelier manner.

Within each lesson, a Do Now section contains a practice or retrieval activity connected to the concept and learning for the day. For example, the "Multiplication and Division Series," Block 1, Topic 3, Lesson 1 requires students to list everything they know about 10. In addition, teacher guidance is provided to extend questioning, such as, "What does it mean if a digit is in the tens place?"

Students are to play the "Brain Arcade" daily. In the "Brain Arcade," students can practice facts, perform quick multi-digit operations, and more. These opportunities provide continuous assessment of student progress, helping educators adjust their teaching strategies as they review the report. As students finish a topic, they can access the "Success Zone," where they solve problems that review previous topics.

Multiple components of the student application ("Learn Zone," "Success Zone," and "Brain Arcade") provide spaced retrieval opportunities with previously learned skills and concepts across learning pathways. In the "Master" portion of the "Learn Zone," students demonstrate mastery of a new idea, skill, or strategy and review problems from prior lessons. After students master the lessons in a topic in the "Learn Zone," the "Success Zone" unlocks a game board that students can use to review the topic. The "Brain Arcade" helps students practice their fluency with procedural math skills.

4.3b – Materials provide interleaved practice opportunities with previously learned skills and concepts across learning pathways.

The *Math 180* "Multiplication and Division Series Teaching Guide" provides a "Block at a Glance" for each block in a series. The "Block at a Glance" is a visual map of the lessons within the three topics, with an example of the strategy students are introduced to in each lesson. In grade 3, the mSpace lessons provide various strategies for multiplication, such as array models, area models, repeated addition, bar models, standard algorithms, and equations. Through the learning progression, students learn more than one strategy to solve multiplication problems and engage in problem sets that require understanding word problems to plan whether to use an appropriate strategy.

In the "Multiplication and Division Series," students use pictorial models to show the creation and separation of equal groups. As they build their understanding, these equal groups are later related to arrays and area models. When solving problems, students can choose any strategy.

Students complete a Card Sort in each series, which provides interleaved practice. For example, in Card Sort: "Division," students are tasked with sorting and matching cards with different representations of multiplication and division. Students must determine which multiplication problems, division problems, and arrays match each other. This prompts students to solidify their understanding of multiplication and division as inverse operations, which will further allow students to use the two operations to solve problems.

The "Multiplication and Division Series" encompasses TEKS 3.4G and 4.5A. 4.5A states that students will represent multi-step problems involving the four operations: addition, subtraction, multiplication, and division. For students to fulfill 4.5A satisfactorily, they must know how to multiply in a variety of ways, which was taught at the beginning of Block 1, and how to add and subtract, which is covered in the "Addition and Subtraction Series."

5. Balance of Conceptual and Procedural Understanding

Materials are designed to balance conceptual understanding, procedural skills, and fluency.

5.1 Development of Conceptual Understanding

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.1a	All criteria for guidance met.	3/3
5.1b	All criteria for guidance met.	2/2
5.1c	All criteria for guidance met.	1/1
—	**TOTAL**	6/6

5.1a – Questions and tasks provide opportunities for students to interpret, analyze, and evaluate models and representations for mathematical concepts and situations.

The *Math 180* "Multiplication and Division Series," Block 3, Topic 1, Lesson 1 provides multiple opportunities for students to interpret, analyze, and evaluate models and representations of division using array models. Students must analyze and interpret models when asked to identify what each part of a division equation represents, such as the total, the number in each group, or the number of groups. Students are asked to evaluate how the array model and area model are alike and different, and to justify their responses.

The *Math 180* program provides opportunities for students to interpret, analyze, and evaluate mathematical concepts within a Performance Task to solve real-world, career-related tasks involving more abstract reasoning to complete at the end of each block in a series. The materials include educator guidance in both the "Teaching Guide" and the mSpace annotated on how to allow students to demonstrate understanding by drawing models and using written explanations.

The *Math 180* material provides opportunities for students to interpret, analyze, and evaluate a question related to an input-output table. They must complete the input and output and express the rule with a variable. This task allows students to analyze and evaluate a model to better understand multiplication patterns.

5.1b – Questions and tasks provide opportunities for students to create concrete models and pictorial representations to represent mathematical situations.

In the *Math 180* "Multiplication and Division Series," Block 3, Topic 1, Lesson 1, students are asked, "How can we use addition to find the total number of tiles? How can we find the total number with multiplication?" Today we will continue to use arrays, but this time we will use them to take out equal groups instead of to form equal groups, and a pictorial model of three equal groups of six.

In the *Math 180* "Decimal and Integers Series," Block 2, Topic 1, Lesson 5, students add and subtract decimals to solve multi-step problems. Students are given a word problem to analyze and determine if

creating a concrete model or a pictorial representation would be the best strategy to represent the mathematical situation in the problem. Students make their thinking visible by creating strip diagrams to represent the solution to the multi-step problem. Providing students with the opportunity to develop concrete models and pictorial representations allows educators to identify misconceptions easily.

In the *Math 180* "Multiplication and Division Series," Block 3, Topic 1, Lesson 5, students are given the problem, "Tanya collected 42 winter coats to donate to a shelter. She packs them in boxes that hold 5 coats each. How many boxes does she need?" Students may draw equal groups or a strip diagram to solve the problem.

5.1c – Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.

The *Math 180 "*Explore Zone" has simulations where students make choices in real-world scenarios and determine how their choices influence math. In "Hype Up the Air," students are advertising experts who choose pictures of attractions to post on a social media account and determine how their choices affect the attendance at an annual city fair. Students then set optimal ticket prices for each attraction (Rock Climbing raises maximum earnings of $7,206 when it costs $6 per ticket), and then use their multiplication and addition skills to determine the expected earnings for the fair.

In the *Math 180* "Multiplication and Division Series," Block 3, Topic 1, Lesson 4, students create as many division equations without remainders as possible with the given digit cards. Students must explain their thinking using the relationship between multiplication and division.

The *Math 180* Performance Task at the end of each block of a series provides a direct correlation for students to see math at work in real-life situations. In the "Multiplication and Division Series," Block 2, students are tasked with painting a mural. They are given the mural's dimensions and told to divide it into five sections. Students can use their knowledge of partial products and area models to help determine the size of each mural section.

5.2 Development of Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.2a	All criteria for guidance met.	2/2
5.2b	All criteria for guidance met.	3/3
5.2c	All criteria for guidance met.	3/3
5.2d	All criteria for guidance met.	1/1
—	**TOTAL**	9/9

5.2a – Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level mathematical tasks.

The "Brain Arcade" provides many games designed to help students become fluid, fluent, and flexible. All games are divided into chapters that are divided into levels, which progress in difficulty. "Brain Arcade Recommendations by Topic" gives game recommendations by series, block, and topic, and can be used by teachers and students to focus on specific skills that align with daily lessons. For example, the game "Decked Out Chapter 2" would align with the "Multiplication and Division Series" Block 1, Topic 1 and involves building fluency and automaticity by identifying equivalent whole number amounts in various representations.

In the *Math 180 "*Multiplication and Division Series," Block 1, Topic 2, students begin the block by using arrays and area models to model multiplication in lesson 1. The teacher promptly states, "Sometimes I do not know a multiplication fact by memory, like 8 × 7. When this happens, I can use an area model to help me multiply. I will show you how." In lesson 2, students use factor pairs for known multiplication facts and fact families to improve their automaticity. This supports fluency by helping students flexibly reason the answer to multiplication facts until they obtain automatic recall of facts.

5.2b – Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures throughout learning pathways.

The "Multiplication and Division Series Teaching Guide" "Block at a Glance" provides a visual map of the lessons within the three topics, with an example of the strategy students are introduced to in each lesson. In grade 3, the mSpace lessons provide various strategies for multiplication, such as array models, area models, repeated addition, bar models, standard algorithms, and equations. Throughout the learning pathway, students learn more than one strategy to solve multiplication problems and engage in problem sets that require understanding word problems to plan whether to use an appropriate strategy.

5.2c – Materials provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for efficiency, flexibility, and accuracy throughout learning pathways.

The *Math 180 Program Guide* explains how the curriculum offers "Comprehensive Support for Students." This information is listed under "Program Overview" and details student opportunities to evaluate mathematical representations, models, strategies, and solutions for efficiency, flexibility, and accuracy through the use of the following sections: "Learn Zone," "Instructional Videos," "My Examples," "Think Aloud," "Targeted Suggestions," "Answer Reveal," and the "Success Zone."

The "Brain Arcade" offers adaptive math games that support students in developing and evaluating efficient, flexible, and accurate computational strategies. Games are organized by number type, operation, and level of complexity, allowing students to explore various mathematical representations and procedures across chapters. Within each chapter, games increase in difficulty, guiding students to apply prior knowledge in new contexts. As students demonstrate procedural fluency, they unlock higher levels of the game, encouraging reflection on the accuracy and efficiency of their problem-solving approaches.

5.2d – Materials contain guidance to support students in selecting increasingly efficient approaches to solve mathematics problems.

Math 180 "Multiplication and Division Series," "Learn Zone" lessons guide students to identify equal groups. The online program walks you through the steps as it describes an array model for an even number. Then, how many are in five groups if there are two tiles in a group? Next, students add to find the total, then progress to multiplication to find the total number. The application progresses from guided to independent practice using visual models, corrective feedback, and support resources. As students progress through the program, support is given to recognize patterns and select more efficient approaches to solve problems fluently in different contexts.

The RDI Index has a Strategy Bank that suggests one strategy per lesson for application in a contextualized problem. This encourages teachers to help students compare strategies and choose more efficiently during Boost or Stretch lessons.

5.3 Balance of Conceptual Understanding and Procedural Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.3a	All criteria for guidance met.	2/2
5.3b	All criteria for guidance met.	3/3
5.3c	All criteria for guidance met.	6/6
—	**TOTAL**	11/11

5.3a – Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed.

The *Math 180 Program Guide* and the "Learning Matrix" clearly emphasize both concepts and procedures of the program. Additionally, the *Math 180 Alignment Guide* provides direct links to example lessons where TEKS are covered, including annotations that explain how each lesson promotes conceptual understanding and procedural skills.

The *Math 180* "Multiplication and Division Series Teaching Guide," Block 2, Topic 1, Lesson 1, offers educators clear guidance in "Why This Matters" at the beginning of each lesson. "Using an area model provides a concrete visual for applying place value to calculate products." This establishes a clear connection between using the area model and understanding place value. The "Block at a Glance" highlights the procedures for addressing the TEK. The development of understanding multiplicative thinking starts with how to identify equal groups, then progresses to finding missing factors, and finally involves multiplying multiples of 10.

In the third grade, Block 3, Topic 1, Lesson 1, "Divide by Taking Out Equal Groups" explicitly addresses both the conceptual and procedural aspects of the TEKS. Conceptually, it builds understanding by using visual models (arrays) to demonstrate division as taking out equal groups. Procedurally, it reinforces fluency through writing division equations, solving problems, and connecting models to real-world situations.

5.3b – Questions and tasks provide opportunities for students to use concrete models, pictorial representations, and abstract models as required by the TEKS.

The materials provide opportunities for students to use concrete, pictorial, and abstract models. For example, in the *Math 180* "Multiplication and Division Series," the educator begins the lesson by relating fingers on hands to equal groups. The educator provides tiles or squares for students to create equal groups to determine the total number of objects. Students move from using tiles to drawing a picture and writing simple multiplication algorithms to match their tiles and pictures.

5.3c – Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts, as required by the TEKS.

The "Multiplication and Division Series" includes activities where students work with tiles and equal groups to represent multiplication as repeated addition, reinforcing the use of concrete objects. Students then sketch arrays and group diagrams to model multiplication and write equivalent numeric expressions, reinforcing the connection between visual models and abstract operations. The lesson explicitly prompts students to explain how the model represents the problem and to define and explain how visual and concrete models relate to partial products and the multiplication equation.

5.4 Development of Academic Mathematical Language

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.4a	All criteria for guidance met.	1/1
5.4b	All criteria for guidance met.	2/2
5.4c	All criteria for guidance met.	1/1
5.4d	All criteria for guidance met.	2/2
5.4e	All criteria for guidance met.	2/2
—	**TOTAL**	8/8

5.4a – Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, or other language development strategies.

In the *Math 180* "Multiplication and Division Series," students use strip diagrams to solve word problems with equal groups. Throughout the guided practice, language development opportunities are provided to relate the models used and actions occurring, such as, "I can use a bar model to represent information in a problem. We call it a bar model because I draw one or more bars." The educator compares the bar model to a rectangular bar of soap. Later in the guided practice, students use their understanding of a bar model to explain their final solutions using learned vocabulary.

The *Math 180* material includes integrated opportunities to develop academic math language through lesson plans with specific language goals and interactive "Teaching Guides" with practical tips for scaffolding content and language development (sentence frames, partner talk, and VRs) and using visual representations and manipulatives.

5.4b – Materials include embedded educator guidance to scaffold, support, and extend students' use of academic mathematical vocabulary in context when communicating with peers and educators.

In the *Math 180* "Multiplication and Division Series," Block 3 Topic 1 Lesson 2, the "High-Leverage Practices" section guides the educator in using scaffolds and extensions by stating, "If students confuse the terms dividend, divisor, and quotient, then help them practice these terms when describing division. Write 24 ÷ 4 = 6, and have students match each term. Repeat with other equations, and then with a blank equation." Tell students that when you solve a multiplication problem, you also solve a division problem. Then ask: "Can you give me an example of how multiplication is related to division? Why is this? How can this relationship help you solve division problems?"

The *Math 180 Program Guide* includes a section that provides pre-teaching support that educators should implement in each VR lesson. The VR explicitly provides teachers with consistent directions to introduce new math vocabulary during the teacher-facilitated instruction. The *Program Guide* includes implementation tips, including reminders to pre-teach the vocabulary and definition on the teacher

display using the routine button on the whiteboard, encouraging the students to use the term in discussions, and for the teacher to use the terms consistently for repeated exposure to ensure development of academic vocabulary.

5.4c – Materials include embedded guidance to support student application of appropriate mathematical language and academic vocabulary in discourse.

Appropriate mathematical discourse is encouraged with embedded guidance in the "Multiplication and Division Series" when the instructor is prompted to have students use Answers Up to communicate their answers to 60 + 24 and 14 x 6. Then the teacher is prompted to "Lead a Discussion," where students can connect the visual array model to their mathematics when asked, "Why is a rectangle a good model for multiplication?"

All lessons in *Math 180* include a scripted think-aloud in which the educator models how to use academic vocabulary. After the think-aloud, the materials provide questioning strategies to engage students in academic discourse, such as "In this equation, which numbers are the factors? Which number is the product?"

5.4d – Materials include embedded guidance to facilitate mathematical conversations allowing students to hear, refine, and use math language with peers.

In the *Math 180* "Multiplication and Division Series," students use the Turn and Talk structure to answer the question, "Here is a rectangle that represents 3 × 178. How can we split 178 using place value?" Educators use "Turn & Talk" to have students discuss how to split 178 (100 + 70 + 8). "Then, students are to record the split in their mSpaces."

The *Math 180* materials explicitly guide educators in using the embedded prompts in each lesson for math class discussions. Through video demonstrations, educators model effective instructional strategies (leading a discussion, vocabulary, language development, Think-Pair-Share, and Turn and Talk) with their students. The discourse strategies allow students to hear, refine, and use math language with peers and educators.

5.4e – Materials include embedded guidance to anticipate a variety of student answers including exemplar responses to questions and tasks, including guidance to support and/or redirect inaccurate student responses.

The "Learn Zone" in the *Math 180* material includes automated feedback on student responses. If a student provides an incorrect answer, the digital platform will give the correct answer and then allow students to correct it. If students continue to make mistakes, step-by-step "Example Problems" will pop up to support and/or redirect student responses to the correct ones. Exemplar responses are available in the example problem.

The *Math 180* material offers a redirect for inaccurate student responses within the "High-Leverage Practices" box called "Modify Tasks." The "Modify Task" in the "Multiplication and Division Lesson 1" guidance for the educator includes: "If students make errors as they divide, then have them write multiplication and addition expressions to check their work."

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	All criteria for guidance met.	1/1
5.5b	All criteria for guidance met.	2/2
5.5c	All criteria for guidance met.	1/1
—	**TOTAL**	4/4

5.5a – TEKS process standards are integrated appropriately into the materials.

The *Math 180* "Multiplication and Division Series," Block 1, Topic 1, Lesson 1 focuses on identifying equal groups. The material emphasizes how students apply TEKS 3.1B by drawing equal groups and writing a number sentence. The "Teaching Guide" then explains how this connects to TEKS 3.1Dii by modeling equal groups to find the product. The Turn and Talk activity allows students to analyze other objects (process) that come in equal groups, connecting to the mathematical idea 3.1Fi.

In the "Multiplication and Division Series," students use an area model to solve three-digit by one-digit multiplication problems. They use a problem-solving model incorporating partial products to support their understanding. As the area model is separated, students explain what their model represents.

5.5b – Materials include a description of how process standards are incorporated and connected throughout the learning pathways.

Each Block in every *Math 180* Series follows a similar structure in integrating process standards. Lessons start with a Do Now activity where students explain their reasoning, followed by whole-group instruction using models and various tools. For instance, in the "Multiplication and Division Series," students use equal-group models for repeated addition and verify accuracy through discussion. The "Teaching Guide" outlines how these models will be used in subsequent lessons.

In *Math 180,* the fifth lesson of each topic focuses on a problem-solving model that is consistent with content and vocabulary objectives in that topic. Educators are provided with guidance, including prompts and strategies for using mathematical tools. Students are prompted to explore multiple approaches and justify their solutions. Problem-solving activities in every fifth lesson of a topic are designed to connect process standards across the learning pathways.

5.5c – Materials include an overview of the TEKS process standards incorporated into each lesson.

The *Math 180* program includes an *Alignment Guide* that lists all TEKS process standards by grade level covered in the program. There are direct links to each lesson where the TEKS and ELPS are addressed.

Materials provide relevant activities for the process standards. Each process standard has two to four resources linked to parts of the program, including mSpace, Exit Tickets, Performance Tasks, Do Nows, or Guided Practice.

The "Teaching Guides" have "Mathematical Thinking" skills, which correlate to the TEKS "Process Standards," listed in each lesson.

6. Productive Struggle

Materials support students in applying disciplinary practices to productive problem-solving, including explaining and revising their thinking.

6.1 Student Self-Efficacy

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.1a	All criteria for guidance met.	3/3
6.1b	All criteria for guidance met.	3/3
6.1c	All criteria for guidance met.	3/3
—	**TOTAL**	9/9

6.1a – Materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics.

Materials provide students with meaningful opportunities to think mathematically and persevere through problem-solving. Students interpret and analyze how to decompose factors to find partial products when multiplying one-digit numbers by two-digit numbers up to 19. The material provides prompts for the educator to introduce the rectangle splitting strategy and for students to create alternative strategies. Students justify solutions using correct mathematical reasoning language.

The Do Now segment at the beginning of each topic encourages students to think mathematically. Students respond to prompts provided by the educator and are given opportunities to consider other possible answers. Next, the students solve problems in a group before justifying solutions with a Turn and Talk.

6.1b – Materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks.

In the "Multiplication and Division Series," the Do Now section includes a "Mathematical Thinking" section, "Make Use of Structure." Students examine a diagram with numbers inside a circle to obtain the relationships among the numbers and identify patterns. The educator asks students to list additional numbers that belong inside the circle. Students use a Turn and Talk structure to share their thought processes and justify their thinking. Students are to use any strategy to solve the problem and listen to their partner's strategies.

Through Do Now activities, students understand, explain, and justify multiple ways to solve problems and complete tasks. They analyze numerical patterns and relationships among fractions to identify which fraction does not belong. Students use strategies introduced by the educator, such as identifying equivalent fractions, comparing the relationships between numerators and denominators, or recognizing benchmark fractions, to support their reasoning. This task encourages flexible thinking and fosters

discussions about different solution methods, enabling reasoning that does not rely solely on visual models.

6.1c – Materials are designed to require students to make sense of mathematics through multiple opportunities for students to do, write about, and discuss math with peers and/or educators.

Think-Pair-Share is a structured discussion method integrated throughout a series. It involves students independently reflecting on a question, problem, or task using sentence stems. Then, students pair up to share and discuss their ideas. Think-Pair-Share helps students to do, discuss, and write about math with peers and enables them to justify their solutions with educators.

The materials help students understand mathematics by engaging in doing and discussing math activities with peers and educators. For example, in the "Multiplication and Division Series," students use tiles representing equal groups to create multiplication sentences. They discuss different examples with the educator and work with a partner to solve problems. The exit ticket asks, "Model and find the total number in 3 equal groups of 4. What is another way you can express the total number 12 into equal groups of?"

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	All criteria for guidance met.	6/6
6.2b	All criteria for guidance met.	4/4
—	**TOTAL**	10/10

6.2a – Materials support educators in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications.

Turn and Talks are integrated throughout a series. Teachers are prompted to have students share their problem-solving methods, including explanations, arguments, and justifications.

The materials give educators support in guiding students to share and reflect on their problem-solving strategies by incorporating "High-Leverage Practices" that promote explanation, justification, and mathematical discussion. The *Math 180* curriculum guides and supports educators with differentiated strategies to help students articulate their thinking and engage in meaningful reflection. Educators receive scaffolded questions to activate prior knowledge and address common misconceptions. For example, when students make errors, educators are prompted to reinforce strategies for self-checking to assist students in evaluating and justifying their solutions. Questions such as "How do the quantities change?" or "What operation should you use?" encourage students to verbalize their explanations, arguments, and justifications.

6.2b – Materials include prompts and guidance to support educators in providing explanatory feedback based on student responses and anticipated misconceptions.

The materials prompt the teachers through a view of the student pages. They give generic prompts for when to intervene if students are struggling, such as, "If they are confusing this, try this."

The materials include answer keys for all assessments given in the mSpace. The answer keys include rationales for all multiple-choice problems. An example of a given rationale on one incorrect answer about whether a table is proportional is: "The student may not understand how to get a ratio from an x/y table."

The materials include a "High-Leverage Practice" section in each lesson that provides guidance to teachers on how to redirect students if students are answering questions incorrectly. Examples from this "High-Leverage Practice" box include: "If students have difficulty expressing their answers, then help them draw a diagram for each object." The "High-Leverage Practice" also includes prompts for students who are struggling to understand, and also to challenge further student thinking. Prompt examples include: "How many intervals do you need to represent the time?" and "If both objects are moving at a constant speed, will the slower object ever catch up?"

The "Decimals and Integers Series" Stretch Lesson 3B provides guidance on how to address student responses. The guidance states, "if students struggle with subtracting integers, use an open number line," and provides a script on how to model using the number line. The guidance also provides scaffolded questions for teachers to ask throughout the lesson but does not provide prompts or guidance to provide feedback on common misconceptions, only if students struggle with subtracting integers.

The Practice portion of the "Learn Zone" offers targeted hints and guidance if students encounter difficulties. The hints are based on possible student misconceptions. The educator can also experience the feedback by going to the "Teacher View" of the Student Application.