Renaissance Learning, Inc.

Supplemental English Mathematics, 5
Freckle for Math, 5

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Supplemental	**9798998577215**	**Digital**	**Adaptive**

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
82.08%	106	4	Flags Not in Report	Flags in Report	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	12 out of 21	57%
2. Progress Monitoring	17 out of 23	74%
3. Supports for All Learners	22 out of 37	59%
4. Depth and Coherence of Key Concepts	16 out of 16	100%
5. Balance of Conceptual and Procedural Understanding	32 out of 38	84%
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	0	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	0	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	3
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	The materials do not include an alignment guide outlining the ELPS, or a rationale for learning paths across grade levels.	3/5
1.1b	All criteria for guidance met.	3/3
1.1c	All criteria for guidance met.	2/2
1.1d	The materials do not include a protocol, or guidance that supports internalization of the lessons.	0/2
1.1e	The materials do not include guidance for instructional leaders to support educators with implementing the materials as designed.	1/2
—	**TOTAL**	9/14

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.

The instructional materials provide a structured and standards-based approach by outlining the Texas Essential Knowledge and Skills (TEKS), identifying the concepts covered, and offering a rationale for adaptive learning paths within the same grade level. The Freckle Teacher Dashboard includes a Standards tab where the TEKS are listed by strand and grade level, allowing teachers to easily locate and reference the standards. The materials also include a "Math Usage Recommendation" flyer that explains how the adaptive learning path adjusts based on student performance, supporting horizontal alignment by keeping students within their grade level while personalizing instruction. The materials do not include an alignment guide outlining the English Language Proficiency Standards (ELPS), or a rationale for how learning paths are designed to progress across grade levels (vertical alignment).

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.

The materials include a "Math Usage Recommendation" located within the Resources tab of the Freckle Teacher Dashboard. The flyer recommends that students in grades 3–12 complete 20 minutes of practice per day, two times per week. The "Freckle Flyer Usage Recommendations" PDF also explains the different online practice options, such as "Focus Skills Practice" for students with Star Math assessment scores.

This guidance supports educators in planning consistent usage routines that adapt to student performance. Targeted math practice worksheets and instructional videos are available within each grade-level TEKS/topic page. These resources serve as strategies for educators to use in various instructional contexts, including just-in-time support. This allows teachers to provide timely, skill-specific interventions aligned to student needs.

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

The materials include an Adaptive Math pathway that personalizes instruction based on diagnostic assessment results. Students are placed at their appropriate level, and instruction adjusts as they progress. Teachers have access to the "Math Levels" report, which provides student performance data by TEKS cluster, including Star Math scores. This supports teachers in identifying areas of need and monitoring progress toward mastery. While a standalone TEKS correlation guide is not provided, the Teacher Dashboard includes embedded TEKS-aligned data. Teachers can click on specific TEKS to view class-level proficiency and assign targeted practice or generate differentiated worksheets.

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

The instructional materials partially support teacher planning and unit internalization of Inquiry Based Learning (IBL). *Freckle* provides lesson overviews that outline the instructional context and purpose. For example, "In this lesson, students will use parentheses in mathematical expressions to determine the experience levels of several presidential candidates." This description helps teachers understand the broader instructional goals and real-world context of the lesson, which supports intentional planning and alignment with the focus TEKS. However, the materials lack a structured protocol to guide teachers in internalizing units or lessons. The instructional materials provide partial support for lesson internalization through structured daily objectives within the IBLs. Although the IBLs include day-by-day objectives such as "Students will be able to evaluate expressions with parentheses," followed by related objectives and a culminating real-world project, these objectives function as a pacing guide rather than a tool for deep lesson preparation. However, the materials do not include a comprehensive, systematic internalization protocol or planning guide to ensure teachers deeply engage with the content and instructional strategies before delivery.

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

The materials include math usage recommendations and "Smart Start Help" articles, which provide resources for instructional leaders to support educators with implementing the materials as designed. For example, the "Math Usage Recommendations" flyer outlines suggested usage by grade band, and the Smart Start Help Article includes a 60-minute course with modules such as "What is Freckle," platform

tours, an implementation checklist, and a teacher's guide. Additionally, the "Administrator Dashboard" and "Renaissance Next for Leaders" provide tools to monitor student progress and performance across topics. The materials do not include guidance for instructional leaders to support educators with implementing the materials as designed, while tools such as the "Administrator Dashboard" offer data visibility. There is no evidence of structured guidance or protocols to help instructional leaders coach or support teachers in the implementation process.

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	This guidance is not applicable to the program.	N/A
1.2b	The materials do not include detailed overviews with learning objectives aligned with the ELPS. The materials do not include assessment resources aligned with the ELPS.	3/5
1.2c	The materials do not include family-facing materials in Spanish, and do not provide actionable support for families to support student learning at home.	0/2
—	**TOTAL**	3/7

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.

The materials include detailed overviews with learning objectives aligned with the TEKS, identifying key concepts covered, and supporting instructional alignment.

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

The materials include a "Family Letter" that is available only in English. The "Family Letter" provides families with general information about what students are currently working on, but it does not offer actionable strategies to support student learning at home.

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	The materials do not include the definition of the types of instructional assessments.	1/2
2.1b	The materials do not include guidance for the consistent administration of instructional assessments.	1/2
2.1c	The materials do not include a calculator tool, or content and language supports that can be enabled or disabled to support individual student needs.	2/4
2.1d	All criteria for guidance met.	4/4
2.1e	All criteria for guidance met.	4/4
—	**TOTAL**	12/16

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

The materials include several assessment options for gathering student data and formative assessment. One assessment included in the materials is the Targeted Practice, which is a formative assessment used to monitor student understanding and adjust content complexity. Educators assign TEKS-aligned content by student and topic to support differentiated instruction. Another assessment option included in the materials is the Benchmark Assessments, which evaluate students' current level of understanding and guide instructional decisions.

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

The materials support accurate administration of instructional assessments by providing clear descriptions of assessment types and their intended purposes within the Math Content tab and Reports section. Teachers can access student performance data, including scores, time spent, and answer summaries, which helps ensure assessments measure what they are designed to assess. The materials support accurate measurement, but they do not define the consistency of administration, such as suggested time limits or step-by-step procedures within the lesson or unit.

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 program offers accommodations, such as text-to-speech functionality for math practice (excluding Fact Practice). Both the Adaptive Math pathway and Targeted Math Practice are available in printable formats to support students who may struggle with digital content. While the materials support customization of assessments and provide guided practice, hints, and videos when students answer incorrectly, they do not include evidence of a calculator tool that can be enabled or disabled to support individual student needs. The materials include a language setting in the Roster section of the Teacher Dashboard that allows educators to mark students for language support, indicated by an "ES" icon. However, the materials do not include content and language supports, such as rephrasing complex sentences or defining unfamiliar words, that can be enabled or disabled to support individual students.

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

The Freckle Math Practice Program includes diagnostic assessments with TEKS-aligned tasks and questions that incorporate multiple interactive item types and span varying levels of cognitive demand. Students engage with formats such as multiple choice, drag-and-drop, text entry, multiselect, and open-ended responses, which appear throughout the Targeted Practice section and Depth of Knowledge (DOK) Challenges. These assessments allow students to demonstrate understanding through more than two unique item types and reflect more than two levels of complexity. The Adaptive Math pathway functions as a diagnostic tool, adjusting in real time to identify mastery and learning gaps. This adaptive feature delivers differentiated, TEKS-aligned instruction and ensures students are assessed at appropriate levels of challenge. Teachers can preview and customize diagnostic items to tailor instruction and address student needs.

The materials clearly describe how students interact with content and how teachers manage assessments, supporting instructional decision-making, and aligning fully with the expectations of this indicator.

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

The Freckle Math Practice Program includes formative assessments with TEKS-aligned tasks and questions that incorporate multiple interactive item types and span varying levels of complexity. Students engage with formats such as multiple choice, drag-and-drop, text entry, multiselect, graphs, and table completion. These formats appear across Adaptive Practice, Targeted Practice, and Benchmark Assessments, allowing students to demonstrate understanding through diverse question types.

The DOK Challenges present real-world problem-solving tasks that reflect more than two levels of cognitive demand. These formative assessments support instructional decision-making by providing insight into student mastery of grade-level standards. Teachers can preview and customize questions before assigning them, which supports differentiation and instructional flexibility.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	Materials do not include a rationale for each correct, or incorrect, response.	1/3
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**	5/7

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

The materials provide scoring information and performance guidance through adaptive reports such as "Student Goal Setting," "Performance by Standard," and "Math Report Cards." These tools allow teachers to monitor student progress, identify mastery of math domains, and adjust instruction accordingly. The Teacher Dashboard displays immediate assessment results, including student accuracy and selected responses. It supports teachers in interpreting student performance by offering actionable next steps, such as reassigning standards, printing practice materials, or assigning benchmarks based on student outcomes. The materials do not include rationales for correct or incorrect responses. The program doesn't include an answer key or embedded explanation that clarifies why an answer is correct or incorrect.

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

The Freckle Teacher Dashboard and Performance by Topic report identify trends in student performance, such as frequently missed TEKS, and provide tools for reassigning targeted tasks to address those gaps. Adaptive pathways automatically adjust based on assessment results, guiding students through a recommended sequence of tasks aligned to their demonstrated needs. Assignment and assessment reports include direct links to follow-up actions, such as reviewing missed questions, reassigning standards, or accessing IBLs, enabling teachers to respond precisely to student performance data.

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 materials include real-time reports on the Teacher Home page, allowing educators to monitor student progress and growth without running manual reports. The Student Goal Setting Report shows each student's goal and their progress status, supporting timely instructional decisions. Students can set

and track their own goals using the Student Goal Setting feature, which includes visual progress bars and weekly goal tracking. These tools help students reflect on their learning and take ownership of their progress. Adaptive practice adjusts to each student's level, and visual indicators show their current standing within a domain. These features promote student engagement and support personal goal setting aligned to learning goals.

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 materials include adaptive practice that provides frequent checks for understanding throughout lessons. When students demonstrate mastery, defined as scoring 80 percent or higher, they move forward to the next level of content. When they struggle, the program automatically remediates and adjusts content to support learning, ensuring students receive targeted practice aligned to their needs. The materials include embedded checks for understanding throughout lessons, and the results are captured in real-time reports such as the Performance by Standard Report. These reports allow teachers to monitor student progress on specific standards and adjust instruction accordingly, ensuring that misunderstandings are addressed promptly. Instructional supports are embedded in Guided Practice, offering step-by-step examples when students struggle with a concept. These supports help clarify misunderstandings and guide students toward correct solutions. IBLs include built-in opportunities for checks of understanding through slideshows and student worksheets. These tools allow teachers to monitor comprehension and adjust instruction during the lesson.

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	The materials do not include explicit guidance for pre-teaching academic vocabulary; the materials do not include explicit guidance for pre-teaching supports or embedded supports for unfamiliar references.	1/4
3.1c	All criteria for guidance met.	2/2
3.1d	The materials do not include a built-in calculator or content and language supports that educators can enable or disable.	1/3
3.1e	All criteria for guidance met.	2/2
—	**TOTAL**	7/12

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 Targeted Math Practice section of *Freckle Math* provides scaffolded support for grade 5 students who are not yet proficient in key math concepts. When a teacher selects a standard, the program identifies students who need additional support and recommends differentiated practice. These recommendations are visible in the Teacher Dashboard and may include prerequisite skills aligned to the selected standard. When a student struggles with a math concept during Targeted Math Practice, *Freckle* may offer a Guided Practice activity. This feature provides a step-by-step example of how to solve a problem similar to the one the student is working on. The student is prompted to answer questions at each step to promote comprehension and reinforce understanding. If a student answers a question incorrectly during Targeted Math Practice, *Freckle Math* automatically provides embedded supports tailored to the student's needs. These include hints, instructional videos, and Work With Me features that activate in real time to guide the student through a similar problem. This adaptive support helps reinforce understanding before the student moves on to more complex content. The Teacher Dashboard guides educators by identifying students who need additional support ("student could use more practice at this standard") and recommending differentiated practice, including prerequisite skills. Teachers can preview and assign supports like Guided Practice, instructional videos, and Work With Me features to provide timely remediation.

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 materials include embedded supports for developing academic vocabulary. Academic terms are underlined within student-facing content, and students can click on the terms to hear or view definitions during both adaptive and teacher-assigned practice. The materials do not provide pre-teaching supports for academic vocabulary. Unfamiliar references appear in the materials without teacher guidance to support student understanding.

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 materials include IBLs that provide opportunities for students to apply grade-level concepts through real-world projects. Each IBL includes teacher guidance, such as warm-up questions, grouping strategies, and prompts to support student-designed research questions and cross-curricular exploration. After completing IBLs, students may explore related topics further, with teacher support to deepen understanding. These activities are designed for students who have demonstrated proficiency in grade-level content and skills. The adaptive platform allows students to access content above their current grade level based on performance, offering targeted and independent practice in higher-grade domains. The program provides explicit guidance to educators by explaining how student progress determines content level, and by offering tools, such as performance dashboards, assignment suggestions, and domain mastery indicators. These features help teachers monitor student growth, assign appropriate challenges, and differentiate instruction to maintain engagement for advanced learners. Teachers can assign Depth of Knowledge (DOK) Challenge Questions that promote higher-order thinking and align with above-grade-level standards. Educator guidance includes using these challenges as discussion starters, formative assessments, or exit tickets, and encouraging student reflection and multiple solution strategies.

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 include accommodations, such as text-to-speech, that educators can enable or disable to support individual students. In grades K–5, questions include audio that can be read aloud to students. Teachers can manage this setting through the roster or assignment settings. The materials do not include content and language supports that meet the definition of accommodations. While students can toggle between English and Spanish and access Spanish audio and navigation, these features are general accessibility tools and are not considered formal accommodations. The materials do not include a built-in calculator that educators can enable or disable.

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 materials provide options for students to demonstrate understanding through IBL slides and projects. These tasks allow students to perform hands-on problem solving, express their thinking through verbal and written responses, and represent their understanding using visual tools, such as graphs and diagrams. Students are given opportunities to choose how they engage with the content, and educators are supported with pacing guidance and suggested prompts to facilitate student exploration. The materials include Guided Practice supports that activate when students struggle during independent math practice. These supports offer scaffolded, step-by-step examples that mirror the problem at hand. Each step prompts students to respond to a guiding question, encouraging them to articulate their reasoning. Additionally, Guided Practice incorporates visual models and instructional supports, enabling students to demonstrate their understanding in multiple ways, through verbal explanation, written response, and visual representation, rather than simply receiving hints. The materials include Constructed Response and DOK tasks that offer students multiple ways to demonstrate understanding. These tasks allow students to choose how they express their reasoning, whether through written explanations, visual models, or real-world applications. Educator guidance supports differentiation by providing varied prompts and scaffolds, enabling students to apply concepts in new contexts while selecting the format that best represents their thinking.

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.

The grade 5 *Freckle Math* materials activate prior knowledge through the instructional videos. When students miss a question in the Targeted Practice or on their adaptive pathway, a math video or hint will appear, reminding them of previous learning that will support them in answering the current question. Students may also choose to receive a hint or click on the Teach Me button (when available) to seek help before missing a question.

The grade 5 materials anchor big ideas in the instructional videos and hints. For example, when students are asked to determine the ordered pair for point C on the coordinate plane, the hint button reminds students that "The first number in a coordinate pair gives the x-axis position. The second number gives the y-axis position." Reminding students of the connection between the location of a number in the ordered pair and the axis it goes with helps solidify this foundational understanding for students.

Each IBL in the program begins with a Number Talk, during which students are encouraged to mentally solve a math problem in as many ways as they can. Then, the teacher facilitates a debrief during which students share their strategies. Number Talks provide an opportunity to highlight and connect key patterns and relationships found in our number system.

IBLs such as "Bakery Trouble" include opportunities for students to connect key patterns, features, and relationships by representing mathematical ideas in multiple ways. In this lesson, students are asked to figure out how much change each customer receives from their bakery purchase and round that amount to the nearest dollar and dime. Students are encouraged to draw pictures or use other strategies to complete the activity. Discussion questions such as "The way that . . . explained the solution caused me to change my thinking because . . ." encourage students to compare and evaluate solution strategies, which will further support the connection of key patterns, features, and relationships.

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.

Freckle Math includes multi-tiered intervention methods for various types of practice, including guided, independent, and collaborative. Students independently engage in adaptive practice and Focus Skills, receive step-by-step support through Guided Practice, and collaborate using Peer-to-Peer Math Supports and IBL. The materials support multiple instructional structures, including whole-group, small-group, and individual learning. Teachers can assign Targeted Practice to students, use Class Grouping reports to form skill-based small groups, and provide adaptive printables for individual or small-group instruction when technology is limited. The platform provides educator guidance to support the effective implementation of interventions. Reports such as Performance by Topic and Class Grouping offer actionable insights, and help articles like "How do students practice Focus Skills in Math and ELA?" confirm that the platform supports differentiated instruction and targeted assignments. Grade 5 IBLs combine teacher-led instruction with collaborative, project-based learning. These lessons, along with adaptive tools and printable resources, ensure that all students receive the support they need to progress toward mastery.

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

Freckle Math includes enrichment and extension methods through IBLs that promote real-world application of grade-level content. In the "Touch Screen Technology" lesson, students use coordinate plane data to identify issues and redesign a homepage. Teacher prompts, inquiry sheets, and optional challenge questions for advanced learners guide students through the activities. The platform supports various forms of engagement, including independent, small-group, and collaborative learning. Students can explore advanced-grade-level content through adaptive and targeted practice, while teachers can assign complex tasks or use completed work for error analysis and deeper discussion.

Teachers receive implementation guidance through help articles such as "Using Freckle for Enrichment," which outlines how to use Independent Practice, Targeted Practice, IBLs, and DOK Challenges to extend learning. These resources support differentiation and promote deeper understanding for high-achieving students. *Freckle Math* allows flexible delivery, including printable and projectable formats for small-group instruction. Teachers can rotate students through tech-based and print-based enrichment activities to meet diverse engagement needs.

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

Freckle Math includes real-time dashboards and reports that allow educators to monitor student progress, accuracy, and pacing during assignments. Reports such as Performance by Topic, Student Math Levels, and Class Grouping help teachers identify which students are excelling or struggling.

Reflection questions at the end of IBLs, such as "What was the most difficult part of today's inquiry?", offer informal opportunities for teachers to assess understanding. While the platform supports data-informed instruction, it does not include explicit guidance on how to use real-time data to provide feedback and adapt teaching in the moment.

Targeted Practice provides prompts and guidance for timely feedback, such as hints, instructional videos, asking a peer who performed well for help, or using a step-by-step guided lesson for incorrectly answered questions.

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	Materials do not include embedded linguistic accommodations that support multiple levels of English-language proficiency.	0/4
3.3c	Materials do not include implementation guidance to support educators in effectively using the materials in state-approved bilingual/ESL programs.	0/1
3.3d	Materials do not include embedded guidance to support emergent bilingual students in developing academic vocabulary or making cross-linguistic connections through oral or written discourse opportunities, nor in building background knowledge through written discourse.	3/8
3.3e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	3/13

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.

The *Freckle Math* program includes general instructional supports such as hints, videos, and guided practice examples that appear when students struggle during adaptive practice. A help icon in the student app provides access to additional examples, and a speaker icon reads word problems aloud. However, these supports are not differentiated for students at varying levels of English language proficiency. Academic vocabulary is underlined and clickable for definitions, but there is no evidence that these features are systematically designed to scaffold instruction based on language proficiency levels. Sentence stems and tips for emergent bilinguals are generic and repeated across lessons, without

variation or alignment to stages of language development. The materials do not demonstrate embedded, differentiated supports aligned to multiple levels of English language proficiency.

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

The materials do not include implementation guidance to support educators in using the program within state-approved bilingual or English as a Second Language (ESL) settings. While the Teacher Dashboard allows Spanish language settings and printable materials in English and Spanish, these features are not supported by instructional strategies or guidance aligned to bilingual or ESL models. There is no evidence of embedded support, such as language objectives, model-specific plans, or professional learning resources tailored to bilingual or ESL instruction.

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.

Materials include embedded guided opportunities to support bilingual students in increasing comprehension through oral and written discourse. Educators implement IBLs in various classroom settings, such as collaborative small groups for students who need to review a concept or advance to a new mathematics concept, according to the Help article, "How do I use IBLs in my classroom?" Furthermore, according to the Help article, "How does Freckle support English Language Learners (ELLs) and Spanish-speaking students?" the online materials respond to an individual student's abilities. The students use sentence starters such as "I agree with . . . because . . ." to further increase comprehension during group problem-solving discussions and work.

Materials include embedded guided opportunities to support bilingual students in building background knowledge through oral discourse. Educators implement IBLs in various classroom settings, such as collaborative small groups for students who need to review a concept or advance to a new mathematics concept. Thus, Emergent Bilingual students with similar language proficiency levels and math skills can be grouped to solve real-world problems. Students use oral discourse to build background knowledge during the Develop Question step of the lesson. Students develop questions or use the Suggested Questions slide to discuss prior knowledge and experiences.

IBLs offer guided opportunities for students to collaborate to solve word problems. The students are encouraged to use precise mathematical language when explaining their solution strategies to one another. The Help article, "How do I use IBLs in my classroom?" guides the educator on whole class discussions and mixed groups, small groups, and centers collaboration. The progression of the IBL increases comprehension and builds background knowledge through oral discourse.

Materials do not include embedded guidance to support emergent bilingual students in developing academic vocabulary or making cross-linguistic connections through oral or written discourse opportunities, nor in building background knowledge through written discourse.

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.

The *Freckle Math* platform embeds TEKS-aligned practice and assessment opportunities throughout learning pathways, including 10-question assignments, exit tickets, and mini tickets. These tasks require students to demonstrate depth of understanding through interactive formats such as multiple choice, drag and drop, and constructed-response prompts. Benchmark Assessments and DOK tasks assess students by individual TEKS strands and include conceptual, visual, and situational prompts. These assessments require students to apply knowledge and critical thinking to real-world, standards-aligned tasks. Teachers can assign practice manually or use adaptive learning features that personalize instruction based on student performance data. The Adaptive and Targeted Math Practice pathways adjust to student proficiency levels and include tasks that require students to demonstrate depth of understanding aligned to the TEKS, supporting instructional decision-making and mastery of grade-level content.

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.

Freckle Math provides an adaptive pathway that begins with a domain-specific pre-test and adjusts in real time based on student performance. As students demonstrate mastery, the system increases the rigor and complexity of questions, supporting progression toward and beyond grade-level proficiency in the TEKS. The *Freckle Math* platform includes DOK challenges and enrichment tasks that target DOK 2 and DOK 3 levels. For example, students may be asked to solve multi-step word problems involving fractions (DOK 2) or justify their reasoning when comparing two different solution strategies (DOK 3). These tasks promote higher-order thinking and support students in developing conceptual understanding and application skills necessary for demonstrating grade-level proficiency in the TEKS. Instructional supports, such as guided practice, hints, videos, and academic vocabulary, are embedded throughout adaptive and

targeted practice. These scaffolds help students access rigorous content and extend learning opportunities for students performing at or above grade level.

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.

Freckle Math includes IBLs that promote horizontal coherence by connecting mathematical patterns and relationships across grade levels. In the "Disaster Relief After Hurricane Katrina" lesson, students use operations and data analysis to plan emergency response efforts, building on prior knowledge while preparing for more advanced problem-solving in later grades. *Freckle Math's* instructional videos and practice tasks reinforce previously taught skills, such as the order of operations, by revisiting them in new contexts. For example, students apply this concept when solving multi-step problems or evaluating expressions with parentheses and exponents, supporting horizontal coherence through repeated application and increasing complexity. *Freckle Math* supports differentiation by assigning prerequisite skill practice when students struggle with grade-level content. These assignments blend foundational and current-grade skills, allowing students to build necessary background knowledge while continuing with core instruction. This aligns with the indicator's focus on scaffolding and targeted support for all learners.

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

In grade 5, *Freckle Math* promotes vertical coherence by connecting fraction operations to prior learning. For instance, when students struggle with adding and subtracting fractions with unlike denominators, *Freckle Math* may assign practice on equivalent fractions and identifying common denominators from grades 3 and 4. This targeted support helps bridge learning gaps while maintaining access to grade-level instruction. In a grade 5 IBL focused on planning a school fundraiser, students view a video about budgeting and pricing. Warm-up questions ask them to revisit equivalent fractions and place value strategies from earlier grades, which they apply when calculating costs and comparing prices.

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.

Freckle Math connects students' prior knowledge of concepts and procedures to current grade-level content through adaptive placement and fluency tools. Students begin each domain with a pre-test and

are placed at an appropriate level, ensuring instruction builds on what they already know. In grade 5, *Freckle Math* connects fraction operations to future domains, such as ratios and percents. When students show proficiency in adding and subtracting fractions, the program may assign extension tasks involving real-world applications, like budgeting or comparing prices, concepts that align with grade 6 ratio reasoning. IBLs include teacher prompts and extension tasks that explicitly connect current learning to future mathematical concepts and procedures. For example, in a grade 4 IBL on area and perimeter, students reflect on multiplication strategies from grade 3 and apply them to calculate garden plots, preparing them for future work with measurement and geometry in grade 5.

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.

Freckle Math promotes retention and coherence through Fact Practice and IBLs. Fact Practice builds fluency in all operations through ongoing, adaptive review. IBLs span multiple days, revisiting prior skills and culminating in projects that apply previously learned concepts, supporting spaced retrieval across learning pathways. The platform's adaptive and targeted practice features allow students to engage with prerequisite skills when needed. This supports spaced retrieval and reinforces prior learning by integrating it into current assignments.

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

Freckle Math provides adaptive practice that presents a series of problems aligned to the same skill or topic, using varied formats such as visuals, diagrams, and constructed responses. This practice is available both through teacher assignment and student-driven progression. IBLs include a Daily Review component that revisits previously learned skills and concepts. These reviews support distributed practice by embedding retrieval opportunities across multiple days. While Adaptive Practice adjusts in rigor, it remains within the same domain. Interleaved practice was observed only in the Daily Review portion of IBLs, showing limited but intentional use of distributed practice strategies.

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 materials include IBLs that provide questions and tasks prompting students to interpret, analyze, and evaluate models and representations of mathematical concepts. These lessons are built around real-world scenarios and include graphs, charts, and data tables that students must work with and explain. In grade 5, the "Designing a Playground" lesson presents students with a table of equipment costs and a grid model representing available land. Students must calculate area, compare costs, and justify their design decisions, demonstrating their ability to synthesize and evaluate multiple mathematical representations. Students engage in DOK Challenges that include DOK 2 and DOK 3 questions, requiring them to analyze models and justify reasoning. These challenges include tasks such as evaluating whether a visual model accurately represents a problem and explaining their reasoning, supporting higher-order thinking and conceptual understanding. The Adaptive Math pathway presents students with models and representations tailored to their learning level, encouraging them to interpret and analyze mathematical ideas in context. For example, students may be asked to compare decimals or fractions using number lines or visual models appropriate to their current skill level. *Freckle Math's* Targeted Practice includes interactive question types (multiple answer, type-in, drag and drop) that allow students to demonstrate understanding in diverse ways, including through interaction with visual models and representations. These formats support students in interpreting and evaluating mathematical concepts beyond traditional multiple-choice formats.

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

In IBLs, students use Inquiry Sheets and slides that prompt them to create pictorial representations to solve real-world problems. For example, in "Foundations of Architecture Day 2," students arrange room shape choices by creating a hierarchy model. Students represent mathematical situations throughout their adaptive pathway by creating concrete models using virtual manipulatives, such as place value discs, color tiles, two-color counters, number bonds, and number lines.

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

The materials include IBLs that provide students with opportunities to apply conceptual understanding to new problem situations and contexts. These lessons are structured around real-world scenarios and encourage students to explore, collaborate, and reflect. In grade 5, the "Designing a Playground" lesson challenges students to apply their understanding of area, budgeting, and spatial reasoning to plan a playground using a table of equipment costs and a grid model of available land. Students must justify their design decisions, demonstrating their ability to apply math concepts in a practical, unfamiliar context. Students engage in DOK Challenges that include DOK 2 and DOK 3 questions, which support the application of conceptual understanding to novel situations. These challenges begin with real-world introductions and ask students to solve problems using reasoning and justification, such as evaluating whether a model accurately represents a multi-step problem. The Adaptive Math pathway presents students with tasks tailored to their learning level that require them to apply math concepts in new contexts. For example, students may solve multi-step word problems involving decimals or fractions, reinforcing their conceptual understanding through application. *Freckle Math's* targeted practice and interactive question types (multiple answer, type-in, drag and drop) provide students with varied opportunities to apply their understanding in different formats. These tasks reinforce conceptual understanding by requiring students to transfer knowledge to new and increasingly complex problem types.

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.

Freckle Math provides Fact Practice assignments intentionally designed to build student fluency and automaticity. Students engage in untimed practice across all operations and progress by scoring 100 percent in three consecutive sessions, supporting repeated and accurate recall of math facts. The platform includes a "Fact Practice" report that tracks student performance by operation and accuracy. This allows teachers to monitor progress and ensure students are developing the automaticity needed to complete grade-level mathematical tasks. Teachers can assign Targeted Practice aligned to specific skills or standards. This helps students focus on essential grade-level content and supports fluency by reinforcing repeated exposure to key concepts through intentional practice. Students receive real-time feedback during Fact Practice, which reinforces correct responses and supports quick, accurate recall. This immediate feedback loop is essential for developing both fluency and automaticity.

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

Freckle Math provides Adaptive and Targeted Practice, which supports the development of efficient, flexible, and accurate mathematical procedures. Students receive guided support when they struggle, including worked examples and interactive steps that help them learn and apply procedures effectively. IBLs include "Number Talks" that prompt students to solve problems using multiple strategies. These opportunities encourage flexibility and efficiency by allowing students to explore different approaches and share their reasoning with peers. Teachers can assign practice by domain or standard, giving students repeated exposure to grade-level expectations. This supports procedural accuracy and efficiency through consistent practice and reinforcement. The platform provides immediate feedback during practice, helping students identify errors and try alternative strategies. This real-time guidance supports the development of accurate and flexible problem-solving skills.

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

Freckle Math provides opportunities for students to evaluate mathematical representations, models, strategies, and solutions through Adaptive and Targeted Practice. Students work independently within domains and use different methods and models to improve their efficiency and accuracy in problem solving. Instructional videos available during independent practice demonstrate multiple strategies for solving problems. These videos help students evaluate and understand alternative approaches to mathematical tasks. IBLs (IBLs) include structured discussion prompts that guide students in evaluating peer solutions for accuracy, flexibility, and efficiency. Sentence starters such as "I solved it differently than . . ." and "The way that . . . explained . . ." support reflective thinking and comparison of strategies. DOK challenges require students to analyze and evaluate mathematical methods and representations. For example, students identify errors in a peer's solution and explain how to correct them, reinforcing their ability to assess the efficiency and accuracy of different approaches.

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

Freckle Math guides students in selecting increasingly efficient approaches through DOK activities. These tasks present problems in multiple ways, encouraging students to compare strategies and refine their problem-solving methods. IBLs include structured opportunities for students to share and reflect on different strategies. For example, in the "Foundations of Architecture" scenario, students classify rooms with different shapes into a visual hierarchy and explain which room designs the student would recommend and why (given that rectangularity and right angles allow for the most flexibility in planning buildings). Having to choose how to classify the shapes and then justify their choice of room design promotes strategic thinking and efficiency. Instructional videos and guided practice examples offer step-by-step support that helps students recognize and apply more efficient methods. Hints and walkthroughs embedded in practice activities reinforce this guidance during independent work. Group work and reflection prompts in IBLs encourage students to explain their thinking and evaluate the efficiency of their approaches. These discussions help students build confidence in selecting effective and efficient strategies.

5.3 Balance of Conceptual Understanding and Procedural Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.3a	Materials do not explicitly state how the conceptual or procedural emphasis of the TEKS is addressed.	0/2
5.3b	All criteria for guidance met.	3/3
5.3c	Materials do not include supports for students in defining and explaining concrete models to abstract concepts.	5/6
—	**TOTAL**	8/11

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

The materials support conceptual understanding by providing virtual manipulatives and visual models within the digital platform. These tools help students explore mathematical ideas and build meaning. However, the materials do not explicitly explain how these tools connect to the conceptual emphasis of the TEKS. The materials support procedural understanding by offering repeated practice with efficient procedures and algorithms. Despite this, the lessons do not clearly articulate how this practice aligns with the procedural expectations of the TEKS or provide instructional guidance that clarifies the balance between conceptual and procedural learning.

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

In grade 5, *Freckle Math* provides students with opportunities to solve division problems using abstract equations, visual models, and real-world scenarios. In the IBL "Driving Across the USA," students divide 2,792 miles by 8 days to plan a cross-country road trip. They use equations to calculate daily mileage and maps to mark stopping points, connecting symbolic reasoning to visual planning. On Day 2, students analyze miles per gallon and tank capacity to determine which vehicle is most fuel-efficient. They complete a data table and perform multi-digit division to compare options. These tasks support the use of pictorial and abstract models, as noted by reviewers who observed students justifying their thinking through structured representations. On Day 3, students divide 2,788 miles by 68 gallons to determine fuel efficiency and calculate average cost per gallon. These tasks reflect the use of real-world data as a concrete context, and students apply division with four-digit dividends and two-digit divisors using equations. This progression from context to model to equation demonstrates how *Freckle* supports the full CPA (concrete-pictorial-abstract) progression required by TEKS 5.3B.

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 materials include supports for students to connect and create representational models to abstract mathematical concepts. In the grade 5 TEKS-aligned practice for 5.8C, students interpret input-output tables and identify missing points on a graph, connecting numeric data to visual representations. DOK questions prompt students to classify two-dimensional figures based on attributes, requiring them to define and explain how visual models relate to abstract classification rules. Instructional videos support students in connecting and explaining representational models, such as tables used to balance a budget, helping them understand the relationship between visual data and symbolic reasoning. The materials do not include supports for students to define or explain their thinking when using concrete models to abstract concepts, which is required to fully meet the indicator.

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.

The Adaptive Math pathway in *Freckle Math* defines academic vocabulary and reinforces problem-solving strategies using visuals and virtual manipulatives. The Guided Practice feature engages students in step-by-step examples that incorporate virtual manipulatives and definitions to illustrate strategies. When students encounter difficulties, they receive hints that include definitions of academic vocabulary and visual representations. IBLs prompt students to engage in daily math discussions using structured sentence stems. Teacher slides include prompts such as "I agree with . . . because . . ." and "I solved it differently because . . .". In the *Freckle Math* "International Coffee Trade" lesson, students use unit cubes with fractional edge lengths to find volume and explain the equivalence of different volume strategies. The lesson slideshow includes sentence stems that prompt students to use precise academic vocabulary, such as *volume*, *unit fraction*, and *equivalent* to describe their process and justify their reasoning during math discussions.

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.

IBL slides scaffold and support students' use of academic vocabulary through sentence stems and structured peer discussions. In "International Coffee Trade," students use prompts to explain their reasoning and compare volume strategies using terms like *unit cube*, and *volume*.

The adaptive math platform supports vocabulary development by underlining key terms in guided practice. Students can click or hover to access definitions through text or audio, reinforcing vocabulary in context.

The adaptive math platform in *Freckle Math* supports vocabulary development by underlining key terms in guided practice. For example, when students work on a problem involving benchmark fractions, the word diagram appears underlined. Students can click or hover over the word to access a definition through text or audio, reinforcing their understanding of the term in context. Lesson routines and writing

prompts in *Freckle Math* extend students' use of academic vocabulary by prompting them to explain their thinking using precise mathematical language. For example, in the "International Coffee Trade" IBL, students participate in peer discussions after completing inquiry sheets and watching the lesson video. Sentence starters such as "I found the volume by . . ." and "My strategy was different because . . ." guide students to use terms like volume, unit cube, and fractional edge lengths when communicating their reasoning with peers and educators.

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

IBL sheets and slides scaffold and support students in applying academic vocabulary through structured written discourse. In "Driving Across the USA," students respond to prompts like, "What are we trying to answer?" and write their questions before beginning the inquiry.

Lesson slides extend students' use of academic vocabulary by including sentence stems that encourage them to explain their reasoning and engage in mathematical discussions. These supports help students build fluency in using precise language during collaborative tasks.

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

IBL slides and inquiry sheets in *Freckle Math* scaffold and support students in hearing and using academic mathematical language during collaborative tasks. In the "Film Photography" lesson, students use sentence frames such as "I agree with . . . because . . .," "I solved it differently than . . . because . . ." and "The way that . . . explained the solution caused me to change my thinking because . . ." to explain their reasoning and reflect on their solutions with peers. Educator materials include embedded prompts that allow students to hear and apply academic vocabulary. Slides such as "Group Spokesperson Presents Solution" and open-ended questions like "What is one tip you would give to a younger student?" support structured mathematical discourse. While the materials support students in hearing and recognizing mathematical language during discourse, they do not include embedded guidance that helps students refine and use academic vocabulary in their own communication 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.

IBLs in *Freckle Math* include daily solution sheets with exemplar responses that model accurate mathematical thinking. In the "Scuba Diving Trip" lesson, students compare decimal values to determine which lakes are deepest. The solution sheet provides modeled responses such as: "You should go to the one with the highest depth in each country," and includes a completed table listing the correct lakes by country. It also shows how to calculate the difference in depth between the two deepest lakes, modeling

both the reasoning and the mathematical process. The Adaptive Math platform supports and redirects student errors by providing hints, videos, and tools when incorrect answers are selected. These supports help students rethink their approach and correct misconceptions. *Freckle Math's* Guided Practice feature provides step-by-step examples that define vocabulary, model strategies, and prompt reflection. These features help students revise their thinking and deepen their understanding of key concepts.

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	All criteria for guidance met.	1/1
5.5b	The materials do not include a description of how process standards are incorporated and connected throughout the learning pathways.	0/2
5.5c	Materials do not include an overview of the TEKS process standards incorporated into each lesson.	0/1
—	**TOTAL**	1/4

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

The Targeted Depth of Knowledge Practice in *Freckle Math* includes tasks that require students to select tools, create visual representations, and communicate mathematical ideas through open-ended responses. These tasks align with 5.1C (select tools, technology, and techniques), 5.1D (communicate mathematical ideas), and 5.1F (analyze mathematical relationships to connect and communicate ideas). The IBLs guide students to analyze information, formulate plans, determine solutions, justify their answers, and evaluate the reasonableness of their solutions. These steps reflect 5.1B (use a problem-solving model) and 5.1G (display, explain, and justify mathematical ideas using precise mathematical language). The lessons also prompt students to use appropriate tools and techniques, such as diagrams, estimation, and number sense, supporting 5.1C. The adaptive math program provides virtual manipulatives and exploratory tasks that allow students to independently select tools to solve problems; this supports 5.1C (select and use appropriate tools and techniques in problem-solving).

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

Freckle Math materials include tasks that align with the TEKS process standards such as 5.1A (apply mathematics to problems in everyday life), 5.1B (use a problem-solving model), and 5.1C (select appropriate tools and techniques), For example, in the "Scuba Diving Trip" IBL, students compare decimal values to determine which lakes are deepest. They must justify their decisions using mathematical reasoning and communicate their thinking, aligning with 5.1G (justify mathematical ideas using precise language). While these tasks reflect the use of process standards within individual lessons, the materials do not include a description of how the process standards are incorporated throughout the learning pathways or how they are connected across lessons. There is no clear guidance for educators on how these standards build over time or link between units, which limits the visibility of a cohesive progression.

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

IBLs in *Freckle Math* include overviews that list the TEKS content standards and describe the lesson activities. In some cases, the tasks align with TEKS process standards such as 5.1B (use a problem-solving model) and 5.1G (justify mathematical ideas), as students analyze real-world problems, develop solution strategies, and explain their reasoning using sentence stems. The lesson overviews do not explicitly describe how the TEKS process standards are incorporated into each lesson. There is no consistent guidance showing how these standards are embedded or connected across the learning pathway, which limits visibility into how students are supported in developing process skills over time.

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.

Targeted Math Assignments allow teachers to select grade 5 TEKS and assign 10-question sets that include multi-step word problems involving concepts such as volume, decimals, and numerical expressions. These assignments support students in applying reasoning and persevering through complex problem solving. IBLs present real-world scenarios, such as designing a cultural center in the "Foundations of Architecture" lesson, which require students to make sense of mathematics, represent their thinking, and revise their strategies through discussion. In this task, students classify two-dimensional figures based on their attributes, create a hierarchy of shapes, and apply their understanding to recommend room shapes for a client. They record their reasoning on inquiry sheets and refine their designs through peer discussion and feedback, promoting deep mathematical thinking and problem solving. Adaptive Math Practice includes features such as Guided Practice, Hints, and automated feedback that address misconceptions (e.g., dividing to find equivalent ratios), helping students re-engage with problems and build conceptual understanding without being given direct answers.

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

IBLs use Touch Screen Technology where students apply their understanding of the coordinate plane to solve real-world problems related to game design and sensor troubleshooting. As they work through the task, students may interpret input-output relationships differently or use varied strategies to resolve issues on the grid. During group discussions, students explain their reasoning and compare approaches, helping them recognize that there are multiple ways to solve problems and justify their thinking.

The Group Spokesperson activities at the end of each IBL guide students to explain their solutions and participate in class discussions using sentence stems such as "I solved it differently than . . . because . . ." and "The way that . . .explained the solution caused me to change my thinking because . . ." These

structured discussions help students justify their thinking and reflect on alternative strategies, especially when comparing methods for solving fraction problems. This supports students in recognizing that there are multiple valid approaches to solving problems and encourages them to justify their thinking through peer dialogue.

Number Talks, embedded in daily review slides, prompt students to solve problems using multiple strategies. Teachers are coached to ask questions such as "Did anyone use a different method?" and "Which strategy seems the easiest to you?" to foster flexible thinking and justification. These conversations build confidence and deepen understanding of numerical relationships, including multiplication and fraction operations.

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.

The materials include IBLs that prompt students to work in groups to solve real-world problems. In the "Driving Across the USA" IBL, students complete inquiry sheets where they draw pictures, show their work, and respond to prompts such as, "What are we trying to answer?" before beginning the inquiry. These tasks require students to do math through collaborative problem solving, write about math by recording their thinking and strategies, and discuss math with peers during group work and class presentations.

The IBL slideshow provides sentence starters to support oral discussion, including, "I agree with . . . because . . ." and, "The way that . . . explained the solution caused me to change my thinking because . . ." These prompts help students explain their reasoning and engage in collaborative dialogue.

Group norms such as, "Everyone participates," "One person speaks at a time," and, "Be nice, compliment each other!" are embedded in the materials to guide productive conversations and ensure respectful collaboration during math tasks.

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.

The materials include a group sharing model in IBLs, where one group presents their solution and explains how they arrived at it. In the grade 5 IBL "Driving Across the USA," students share their thinking during the "Group Spokesperson Presents Solution" section. Sentence starters such as "Our group solved it this way because . . ." and "We used this strategy because . . ." support students in clearly articulating and defending their mathematical reasoning during presentations.

The Group Spokesperson Presents Solution section of the IBL slideshow prompts students to explain their thinking and respond to peer strategies. Sentence starters such as "I agree with . . . because . . ." and "The way that . . .explained the solution caused me to change my thinking because . . ." guide students in reflecting on and critiquing the strategies presented by others. These discussions provide opportunities for students to share explanations, make arguments, and justify their solutions in a collaborative setting.

Reflection questions at the end of each IBL slideshow prompt students to evaluate their own thinking. Prompts such as "What did you do best at during today's inquiry?" and "If you could start over, what would you do differently?" guide students to explain and justify their approaches while considering improvements.

Number Talks include teacher prompts such as "Can someone explain . . . strategy?" and "Do you agree with that method? Why or why not?" These routines encourage students to reflect on and critique peer strategies, justify their own thinking, and engage in mathematical argumentation.

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

When a grade 5 student answers a question incorrectly in *Freckle Math's* Adaptive Math Practice, the platform provides immediate, automated feedback. For example, if a student struggles with identifying a quadrilateral, a hint appears stating: "A quadrilateral is a polygon with 4 sides, 4 corners, and 4 angles." This feedback helps the student revise their thinking and re-engage with the problem, supporting conceptual understanding based on their response. *Freckle Math's* Guided Practice presents step-by-step examples that break down problems into manageable parts and includes prompts tied to common misconceptions. For instance, when students confuse the size of fractional parts, educators are

prompted to ask: "Is the fractional part bigger when the denominator is larger? Why?" This question encourages students to reflect on their reasoning and correct misunderstandings, deepening their grasp of the concept.

The materials include prompts tied to common misconceptions. For example, when students forget what a quadrilateral is, a hint appears with a definition and visual support to guide students toward the correct answer.

Educators use think-aloud stems and cue cards to address misconceptions. Prompts such as "Is the fractional part bigger when the denominator is larger? Why?" help students reflect on their reasoning and deepen conceptual understanding.