CARNEGIE LEARNING

Features and Functionality

Carnegie Learning Texas Supplemental Math

Carnegie Learning's Texas Supplemental Math programs, MATHia and MATHstream, ensure that all students can engage with high-quality, Texas Essential Knowledge and Skill (TEKS)-aligned mathematics instruction regardless of learning needs or environment. MATHia provides an intelligent 1-on-1 tutoring experience that adapts pacing, problem difficulty, and feedback based on student performance, with features like multi-level hints, step-by-step Worked Examples, animations, and an always-available glossary to support comprehension. MATHstream's interactive, adaptive videos incorporate visual models, real-world contexts, and scaffolded questioning to support diverse learners. Both platforms offer built-in formative assessments and detailed progress reports, enabling teachers to identify and address individual needs, while embedded supports for English language learners and differentiated pathways help accommodate varied language proficiencies, methods of interaction, and skill levels. Together, they create an accessible, flexible learning environment that delivers personalized instruction and targeted supports to help every student succeed.

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Intentional Instructional Design

MATHstream and MATHia advance students toward grade-level and above-grade-level mastery of the Texas Essential Knowledge and Skills (TEKS) by gradually increasing the rigor and complexity of questions, tasks, and enrichment opportunities.

MATHia and MATHstream both connect students' prior knowledge of concepts and procedures to the mathematical ideas they must master at their current grade level, while building a strong bridge to the skills required in future learning. In MATHia, students begin with problems that tap into their existing understanding and progress to increasingly complex, multi-step tasks that demand critical thinking, multiple representations, and application of concepts in novel situations, with enrichment and extension opportunities challenging them with advanced content. Similarly, MATHstream's interactive, adaptive video sequences start by activating foundational understanding from earlier learning, then advance to new grade-level concepts presented in ways that explicitly link to what students already know.

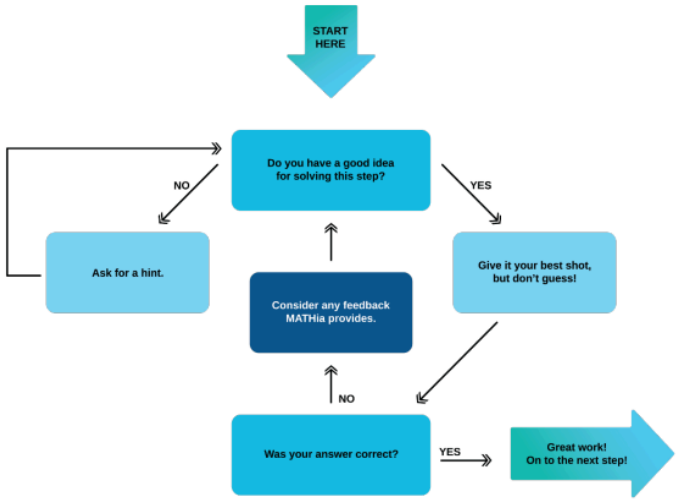
In both platforms, questions and tasks, including enrichment and extension materials, are purposefully sequenced to grow in rigor and complexity, moving from accessible, scaffolded problems to challenging applications that require deeper reasoning, real-world problem solving, and advanced conceptual understanding. This intentional progression ensures mastery of the mathematics TEKS at the current grade level while preparing students to excel at above-grade-level content, reinforcing familiar ideas in increasingly sophisticated forms and fostering both immediate proficiency and long-term readiness for advanced work.

Together, MATHia's individualized learning environment and MATHstream's adaptive, interactive lessons create a feedback-rich ecosystem that blends guided exploration, skill-building, and conceptual understanding, ensuring students not only learn mathematics but also develop the confidence and perseverance to apply it in diverse contexts.

Beyond the course-structured organization available for each course in the Clear Learning Center (CLC), Texas Supplemental Math offers the entire Carnegie Learning Supplemental Library. All MATHia Workspaces and MATHstreams with aligned TEKS are easily accessible through the CLC Search. Access to the full Library enables educators to target specific concepts and skills, and empowers them to support their students.

Integrated Instructional Tools

MATHia offers a comprehensive suite of instructional tools designed to engage students in thinking mathematically, building perseverance, and making sense of math. One of its central supports is the multi-level hints system, which guides students toward solutions without giving away the answer, fostering independence and problem-solving skills. Explore Tools allow students to investigate concepts and identify patterns in ways that make sense to them, promoting conceptual discovery rather than rote memorization. Animations visually demonstrate mathematical ideas and can be paused, replayed, and analyzed, helping students connect abstract representations to concrete understanding. Classification Tools prompt learners to sort and group mathematical concepts or solutions, strengthening their ability to recognize underlying structures. Worked Examples present step-by-step problem solutions, encouraging students to reflect on processes, identify misconceptions, and model effective strategies. The Solver feature provides a guided problem-solving environment, allowing students to apply their skills to complex, multi-step problems with adaptive support.



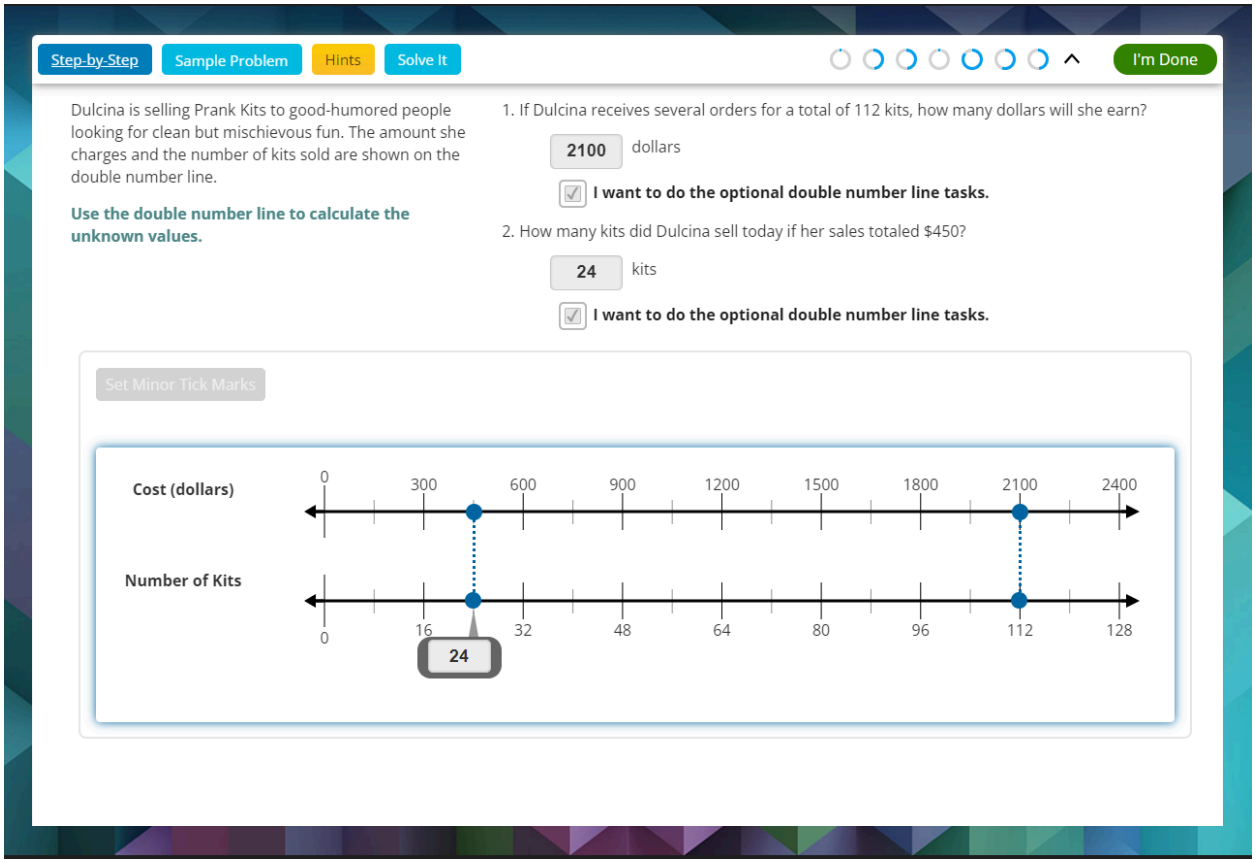
The hint structure in MATHia:

Level 1:
The first hint helps you better understand what your problem-solving goal is. This is like when your teacher restates the question for you.

Level 2:
After the first hint (and before the last hint), you will be provided with more information to help you achieve your current problem-solving goal.

Level 3:
The last hint MATHia provides will give you the answer to the current problem-step so that you can move on to more opportunities to show your learning. The last hint – which gives you the answer – is the **ONLY** time asking for a hint will have a negative impact on the Skillometer. After asking for a Level 3 hint, think about where that correct answer comes from so you can get it right on the next problem without a hint.

Beyond these core elements, MATHia includes features like Investigations, Peer Analysis, and Real-World Problem Solving activities that bridge mathematics to authentic contexts. Investigations engage students in open-ended exploration, encouraging them to generate hypotheses, test ideas, and draw conclusions using mathematical reasoning. Real-world problem-solving tasks place mathematics in practical scenarios, demonstrating the relevance of concepts to daily life and various careers. These tasks cultivate persistence and critical thinking while reinforcing mathematical fluency.



MATHstream complements MATHia by providing live, interactive, adaptive video instruction led by the Mathstream Tutor, who acts much like a real-time teacher, asking probing questions, explaining concepts in multiple ways, and adjusting pacing to match student needs. Embedded Quick Checks are strategically placed throughout lessons to assess understanding in the moment, allowing the tutor to adapt instruction instantly. Adaptive segments in MATHstream dynamically adjust difficulty, sequence, and problem type based on student responses, ensuring each learner receives a personalized pathway through the content.

MATHia and MATHstream give students access to the tools and supports they need to think and work like mathematicians. In MATHia, students use calculators, graphing tools, and a math-specific keyboard to enter equations, inequalities, and symbols with accuracy, which helps them connect algebraic and graphical representations seamlessly. In MATHia, students use calculators and a math-specific keyboard to enter mathematical symbols. Together, MATHia and MATHstream give students both the tools and the interactive environment to explore, represent, and communicate mathematics effectively.

The Solve for Me feature in MATHia enables teachers to access the solution to a question quickly, empowering them to provide accurate guidance.

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Multiple Representations and Models

MATHstream and MATHia provide students with multiple opportunities to create, use, and connect concrete, pictorial, and abstract representations of mathematical ideas in alignment with the TEKS. MATHia workspaces often begin with interactive tools, such as dynamic diagrams, manipulatives, or visual models, that allow students to explore mathematical concepts in a tangible way before moving to symbolic representations. For example, Explore Tools and Animations guide students in constructing geometric transformations, modeling proportional relationships with graphs and tables, or simulating real-world measurement situations, thereby enabling them to create concrete models that serve as a foundation for later abstract reasoning. MATHstream's adaptive video lessons likewise incorporate scaffolded tasks that encourage students to visualize and model scenarios, from using number lines and area models in early grades to representing algebraic and geometric relationships in higher grades.

The design of these questions and tasks reflects the TEKS requirement that students progress fluidly among concrete, pictorial, and abstract forms of a concept. Worked Examples often present multiple representations side-by-side, such as numerical data, algebraic equations, geometric diagrams, and verbal descriptions, and prompt students to connect these forms by identifying patterns, defining terms, or explaining how one representation informs another.

In addition, the software embeds supports for connecting and explaining these representations. Hints, glossaries, and step-by-step problem-solving guides in MATHia help students bridge the gap between the model they see and the abstract form they are working toward. As students progress, they revisit familiar models in increasingly sophisticated contexts, such as using area models for both basic multiplication in early grades and polynomial multiplication in Algebra, solidifying their ability to connect concrete and pictorial reasoning to symbolic, numeric, and algorithmic approaches. This intentional integration ensures that students not only "do" mathematics but also understand the underlying structures that the models represent.

Accessible Learning and Student Accommodations

MATHia's accessibility extends beyond the software's instructional design into its robust reporting features, which empower teachers to make data-driven decisions. Tools like the Adaptive Personalized Learning Score (APLSE) Report, Standards Report, Session Report, and Student Detail Report give educators clear insight into class- and student-level progress. These reports help teachers group students strategically, provide targeted interventions, and celebrate successes. By capturing data on performance, pacing, time on task, and mastery of standards, MATHia supports differentiated instruction and ensures that no learner is left behind.

The MATHia software was designed and developed following known practices for meeting ADA and 508 compliance and accessibility requirements. MATHia assessments are available digitally with accommodations such as text-to-speech/audio, an embedded glossary, alt text, keyboard navigation features, color contrast, closed captioning, and calculator options. MATHia ensures equitable access without compromising rigor.

For English learners and students with varying language proficiencies, teachers should aim to remove the language skill barrier so that students can focus primarily on building their mathematical skills. Have every student turn on Text to Speech on the first day of class. This way, they can feel empowered to self-select when they need help reading and when they don't. This approach enables students to build self-advocacy skills, rather than relying solely on assistance. Similarly, students can use Google Translate and add it as a Chrome extension. They should be able to toggle it on and off to create bilingual text in the workspace. A full exploration of MATHia's accessibility is in the Texas Help Center.

MATHstream interactive videos are available digitally with accommodations like English and Spanish closed captioning. When utilizing MATHstream for bilingual students, consider having students enable Spanish closed captioning while retaining the English language audio.

Reporting and Progress Monitoring

MATHia includes a robust set of reporting tools that give teachers and students actionable insights into progress, performance, and pacing.

- APLSE (Adaptive Personalized Learning Score) Report – Predicts student progress toward year-end goals by combining all aspects of a student's work in MATHia. It provides both a class view (overall progress and projected outcomes) and a student view (individual readiness and whether the student is on track to complete the curriculum).
- Standards Report – Shows how well students are mastering specific standards. The class view summarizes performance across the group, while the student view details mastery by individual standard, helping teachers identify learning gaps.
- Session Report – Offers a day-to-day breakdown of student work, including time spent, problems completed, hints requested, and errors made. It can be viewed for the entire class or individual students, making it helpful in monitoring participation and engagement.
- Student Detail Report – Tracks progress at the module, unit, and workspace level, showing completion rates, time on task, and performance scores for each section of the syllabus.

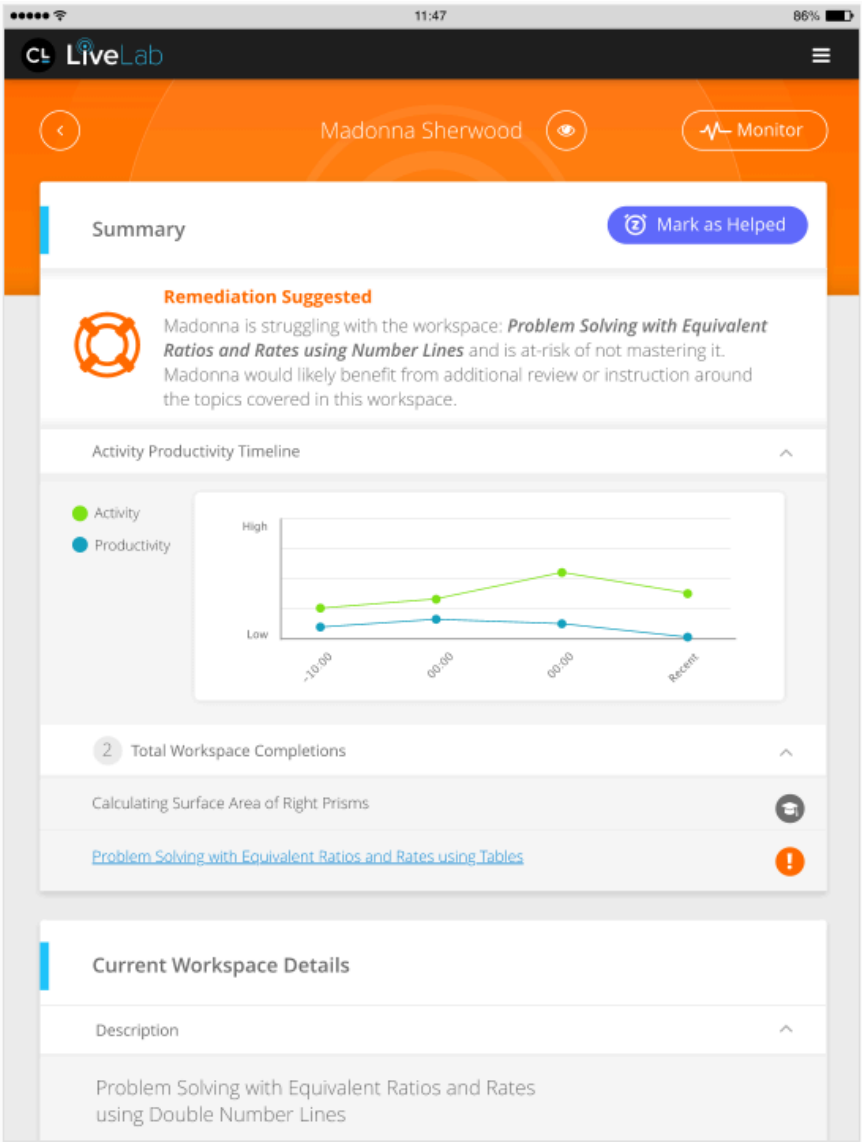
While MATHstream's live, adaptive nature means much of its feedback happens in real time through Quick Checks and tutor-led adjustments, teachers can also review session data from these activities to monitor participation, comprehension, and engagement trends.

- Student Grouping Report – Monitors, for each stream, the average score across all students who have completed the stream.
- Stream Progress Report – Monitors the number of streams completed, the total average score, and the performance breakdown for every student.

Together, these tools allow educators to identify where students are excelling, where they may need additional support, and how to adjust instruction to maximize learning outcomes.

LiveLab

MATHia powers LiveLab, our live facilitation tool that provides real-time data, such as when students are working or idle. It provides teachers with a protocol for intervening and supporting students who are stuck while working in MATHia, offering real-time, adaptive implementation support. The tool provides a real-time view of student progress in MATHia, highlighting students who are stuck, idle, or in need of support. Students can be anonymized. Alerts notify teachers when students need extra support and also let students know when they've reached milestones. With color-coded indicators and progress summaries, educators receive immediate, actionable information that enables them to identify when and how to intervene. Together, this live data and Solve for Me empower teachers to deliver targeted, just-in-time feedback, fostering more responsive and effective instruction during the learning process.



Putting it all together

MATHia: Ongoing, Adaptive Monitoring

Key Features for Monitoring Progress

- Formative Assessment Built In: Every workspace provides immediate feedback, hints, and scaffolds, helping students self-monitor while generating data for teachers.
- Progress Bar & Concept Mastery: Shows students' advancement on targeted skills, keeping them accountable and allowing teachers to identify misconceptions quickly.
- Reports for Action:
    - APLSE Report (predictive progress monitoring of students/class)
    - Session Report (daily/weekly student work summary)
    - Standards Report (mastery of TEKS-aligned standards)
    - Student Detail Report (workspace-by-workspace insights)

Educator Recommendations

- First Day: Have every student turn on Text to Speech on the first day of class
- Weekly: Review APLSE and Standards Reports to adjust grouping for targeted instruction.
- Daily/Session: Use Session Reports for quick interventions and conferencing.
- Ongoing: Use LiveLab for formative classroom checks; encourage students to utilize the glossary.

MATHstream: Strategic Whole-Class, Small-Group, and Individual Use

Opportunities to Monitor and Respond

- Interactive Pauses: Teachers can circulate, prompt discussion, and check responses during embedded questions.
- Adaptive Feedback: Students receive real-time scaffolds while teachers gain data on common challenges.
- Skill Series Progression: Each student's movement through readiness skills highlights strengths and gaps for targeted reteaching.
- Reports for Action:
    - Student Grouping Report – (average score across streams)
    - Stream Progress Report – (stream work summary)

Educator Recommendations

- First Day: Consider having students enable closed captioning (English or Spanish)
- Before Lessons: Preview readiness skill streams to anticipate misconceptions.
- During Lessons: Monitor responses during interactive checks; use errors to launch discourse.
- After Lessons: Align MATHstream data with MATHia workspace performance to form flexible small groups.

Coordinating MATHia® and MATHstream

MATHia	MATHstream	Strategic Educator Recommendations
Personalized practice with immediate feedback	Whole-class or individual adaptive video lessons	Use MATHia data to identify which MATHstream lessons need whole-class reinforcement.
Detailed reports (APLSE, Standards, Session, Detail)	Targeted Reports (Session, Student Grouping)	Cross-reference reports to ensure readiness skills (fractions, proportionality, equations) are reinforced.
Students demonstrate individual mastery	Students engage in shared problem-solving	Assign targeted MATHia workspaces and MATHstream Skillstreams after MATHstream Lessonstream sessions to personalize follow-up practice.

Daily

- Circulate during MATHia and MATHstream for in-the-moment formative feedback.
- Use the Session Report to note student productivity and persistence.

Weekly

- Review MATHia APLSE and Standards Reports, and MATHstream Student Grouping Reports, for grouping and instructional adjustments.
- Incorporate short teacher-led interventions aligned to report findings.

Unit/Topic Level

- Administer formative assessments in the curriculum to confirm readiness for summative tasks.
- Use MATHstream collections to pre-teach or re-teach concepts.

Conclusion

By combining accessibility features, progressive rigor, multiple forms of representation, and actionable data, MATHia and MATHstream empower educators to meet diverse student needs. These tools function as flexible, high-impact systems that help Texas students build the knowledge and skills necessary for long-term mathematical success.