CURRICULUM RATINGS BY TEACHERS

HELLO AND WELCOME

TO A CURATE REPORT!

The CUrriculum RAtings by TEachers (CURATE) project supports the Department's Curriculum Matters: IMplement MA initiative to strengthen curriculum in Massachusetts through educator access to high-quality instructional materials (HQIM) and ongoing curriculum-based professional learning (CBPL). The initiative is rooted in the following theory of action:

- *If* LEAs and prep providers have the information and support they need to give in-service and pre-service teachers the tools to access, evaluate, and adopt, high-quality, standards-aligned, culturally responsive curricular materials
- *and if* sustainable and collaborative professional learning structures help in-service and pre-service teachers use those materials to orchestrate student learning experiences skillfully
- *then* teacher and student experiences, and ultimately student outcomes, will improve.

Through the CURATE project, the Department convenes Massachusetts teachers to review and rate evidence of alignment and quality of comprehensive core curricular materials. CURATE panels' consensus deliberations and decisions are captured in the report. CURATE reports are resources to support local education agencies to make informed local decisions about curricula, as *part* of a robust, inclusive, and equity-centered curriculum evaluation and selection process with input from diverse stakeholders, including families.

High-quality curricular materials exhibit a coherent sequence of lessons that target learning of grade-appropriate knowledge and skills, as defined by the Massachusetts curriculum frameworks, through instructional practices and strategies that are well supported by research and other characteristics, such as rigorous, engaging content and inclusive design. In Massachusetts, high-quality instructional materials (HQIM) should strongly support teachers in their everyday work to be inclusive and culturally & linguistically sustaining, to advance the Educational Vision and

actualize the Vision of a Massachusetts Graduate.

Although CURATE-reviewed curricular products may be found to meet DESE's definition of "high quality," it does not mean that the product is "perfect" and without limitations. Local education agencies (LEAs) should consider their local assets, needs, and equity priorities and read the full CURATE report to determine the "substantive" adaptation or supplementation that may be required to serve students well when implementing a specific product since ratings of *Partially Meets Expectations* and areas for growth reported may impact each LEA differently (see *Definitions of Ratings*).

WE WELCOME YOUR FEEDBACK

We encourage and thank you for providing feedback on CURATE reports through **this survey**, to support continuous improvement efforts, ensuring CURATE reports remain a useful resource.

FULL REPORT
MIDDLE SCHOOL MATH SOLUTION
CARNEGIE LEARNING
2022

Middle School Math Solution is a digital and print resource for Grades 6-8. See the Carnegie Learning website and the publisher-provided information later in this report for product specifications. Grades reviewed: 6-8

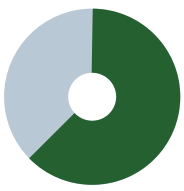
> "Materials provide opportunities for students to engage in mathematical discourse. The discussion prompts are strong, and they provide opportunities for students to share their thinking and to critique the reasoning of others."
> *Massachusetts educator*

STANDARDS ALIGNMENT

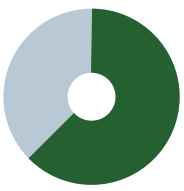
CONTENT STANDARDS AND ORGANIZATION

GRADE-APPROPRIATE PRACTICES

CLASSROOM APPLICATION



ACCESSIBILITY FOR STUDENTS



USABILITY FOR TEACHERS

IMPACT ON LEARNING

ALIGNMENT TO MASSACHUSETTS STANDARDS AND SUPPORTING INCLUSIVE AND CULTURALLY & LINGUISTICALLY SUSTAINING PRACTICE

MA Priorities	*The materials include/ provide…*	*Teachers will need to augment materials with integrity to include/provide…*
MA-Specific Mathematics Standards	• Intentional progression of learning that systematically builds upon grade-level standards and students' knowledge • Explanations of how lessons, units and grades align with MA-specific content standards • Narratives that link Content Standards to Standards for Mathematical Practice • Units that reinforce conceptual understanding and procedural fluency in balanced and effective ways	• Massachusetts-specific standards 6.RP.A.3e, 6.SP.B.4a, 8.EE.C.8b, to ensure alignment and support for state-specific learning goals • Further exploration of the conceptual topics covered in previous grades
Students with Disabilities (SWDs)	• Strategies for differentiating access points to content for students with disabilities • Multiple entry points for learning that leverage the strengths of all learners • Intervention resources, including videos in English and Spanish, aligned with MA-specific standards	• Use of multiple representations when solving problems • Consistent supports for students with disabilities throughout all lessons • Access to manipulatives or physical tools to support hands-on learning

MA Priorities	*The materials include/ provide…*	*Teachers will need to augment materials with integrity to include/provide…*
English Learners (ELs)	• WIDA-alignment document with the WIDA English Language Development (ELD) Standards for Mathematics to connect each lesson to a language strategy and goal • Materials translated in Spanish	• Scaffolded support for ELs at various levels of English language proficiency • Strategies to foster language development in academic discourse • Materials translated languages other than Spanish
Students Working Above or Below Grade Level	**Working Above Grade Level** • Differentiated strategies for instruction for students working above or below grade level **Working Below Grade Level** • Pre-unit assessments for teachers to assess prerequisite skills and understanding	**Working Above Grade Level** • Extension activities that enable students to connect learning across clusters or domains of various grade levels • Explicit assignment of MATHia assignments for students working above grade level **Working Below Grade Level** • Guidance on expectations for students performing below grade level • Annotated student work at various levels of achievement

MA Priorities	*The materials include/ provide…*	*Teachers will need to augment materials with integrity to include/provide…*
Diverse Representation & Perspectives	• A Teacher Implementation Guide that breaks down lessons, articulates the intent of each standard, and connects to previously taught concepts • "Look fors" and conversation starters to support instructional delivery	• Real-world application of concepts • Connection to the lives, identities and home backgrounds of culturally and linguistically diverse students • Additional representations to reflect and elevate the cultures and backgrounds of students—including race, language, ethnicity, and gender • Strategies for teachers to recognize their own pedagogical biases

STRENGTHS AND AREAS FOR GROWTH

STANDARDS ALIGNMENT

Content Standards and Organization

Materials are well aligned with the Massachusetts curriculum framework and progress in a coherent manner, although teachers will need to supplement select topic areas within the Massachusetts-specific standards. Materials build conceptual understanding, procedural fluency, and real-world application in balanced and effective ways. Teachers will need to supplement materials to ensure consistent conceptual exploration of topics covered in previous grades and include real-world data that highlights systemic inequities.

Strengths

- Content progresses coherently from unit to unit and grade to grade. The "Course Planning" materials include a Scope and Sequence with an accompanying "Massachusetts Standards Alignment Document." Teachers are able to select materials aligned to specific standards based on their state. Materials incorporate standards correlation information that explains the role of the standards in the context of the overall series. Lessons include problems and activities that connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important (EdReports, 1E). When relevant, content from future grades is identified and related to grade-level work, and materials relate grade-level concepts explicitly to prior knowledge from earlier grades. The lesson structure in Grade 6, Module 4 begins with a readiness assessment aligned to skills from prior grade levels. The module includes a section titled "Connection to Prior Learning," which references content from Grade 5—such as work with the positive coordinate plane. The module also includes "Connections to Future Learning," which previews how students will apply their understanding to solve operational problems involving both positive and negative numbers, including the use of a number line.

- Materials build conceptual understanding, procedural fluency, and real-world application in balanced and effective ways. In Grade 8, Module 4, Topic 1, Lesson 2, materials allow students to gain a deep understanding of the underlying principles of expanding number systems by using rational approximations of irrational numbers to compare size. Students are then prompted to locate numbers on a number line diagram and estimate the values of expressions. In subsequent modules, the interactive mixed practice includes real-world problems, as well as a sorting activity for students to demonstrate their understanding of the difference between rational and irrational numbers. In Grade 7, Module 2, Topic 1,

Lesson 1 students explore the addition of positive and negative integers by using the game of football as a model, focusing on distance travelled in each direction of the conceptualized game. Students use the integers from their model to create equations, followed by a discussion on the connection between the model and the equation, and additional real-world applications of adding and subtracting integers.

Areas for Growth

- While most Massachusetts-specific standards are addressed, teachers will need to supplement materials to address the Massachusetts-specific standards 6.RP.A.3e, 6.SP.B.4a, 8.EE.C.8b, as they are not explicitly covered within the core materials.

- While materials build conceptual understanding, there are inconsistencies in the conceptual exploration of topics covered in previous grades. In Grade 6, Module 3, Topic 1, Lesson 1, the order of operations is taught using the mnemonic device "PEMDAS" without explaining the rationale for the concept. Teachers will need to supplement materials to ensure students have a conceptual understanding for the basis of the order of operations. Materials do not include real-world data that highlights systemic inequities to promote critical thinking and equity.

STANDARDS ALIGNMENT

Grade-Appropriate Practices

Materials encourage students to justify solutions to problems using clear oral and written communication and to explain their thinking to others and evaluate others' thinking. Materials lack support to help students understand the purpose and appropriate selection of mathematical tools and a comprehensive approach to fostering language development in academic discourse, particularly for English learners.

Strengths

- Materials encourage students to justify solutions to problems using clear oral and written communication. Materials support the intentional development of Standards for Mathematical Practice 3 (SMP 3) (EdReports, 2F). Materials include opportunities for students to construct viable arguments and critique the reasoning of others (SMP 3). In Grade 6, Module 3, Topic 2, Lesson 4 materials require students to identify which equations in a provided set are always true, never true, and which are not yet determinable as true or false. Students then are required to explain how they determined the status of each equation. Following this activity, students write an equation with variables that has no possible solution and then explain to others why the equation has no solution. Materials encourage students to justify solutions to problems using communication skills. In Grade 7, Module 3, Topic 1, Lesson 2, students are asked to compare their models with those of their classmates, stating the unknown quantities that the models represent, as well as the algebraic expressions that could be written to represent different parts of the situation.

- Materials encourage students to solve problems using a range of tools. Materials enable students to model with mathematics, as well as choose tools strategically, engaging SMP 4 and SMP 5 (EdReports, 2G). In Grade 6, Modules 2-4, materials introduce the learning sequence as an exploration of how quantities relate to each other. Students explore the ratio relationship of quantities using double number lines, xy-tables, and xy-graphs. Students use these tools when working with percentages, unit rates, and unit conversions. In Grade 8, Module 5, Topic 2, Lessons 1-4, materials provide a variety of scenarios for students to calculate the volumes of three-dimensional solids. Students are provided the opportunity to make connections between geometric solids and their calculations before justifying their solutions.

- Materials encourage students to explain their thinking to others and evaluate others' thinking. In Grade

8, the "Lesson Facilitation Guide" introduces peer learning routines to support students in evaluating and critiquing one another's problem-solving strategies. Students are encouraged to work collaboratively, comparing approaches and identifying both shared and differing strategies. Materials emphasize that learning happens through discussion, reflection, and making mistakes, and they position communication, cooperation, and valuing diverse perspectives as essential components of both mathematical thinking and life skills. Throughout the module, students are expected to engage with math by exploring ideas, talking with peers, and learning from one another. In Grade 8, the "Lesson Facilitation Guide" prompts teachers to look for whether students are modeling appropriate social awareness, listening to the perspectives of others, and empathizing with others' experiences as they identify and discuss patterns in bivariate data.

- Materials provide opportunities for students to participate in regular conversation and collaboration with peers focused on lesson content. In Grade 8, Module 2, Topic 3, Lesson 5, two activities on linear equation systems provide opportunities for students to collaborate on writing equations and solving systems together. In Grade 6, Module 1, Topic 1, Lesson 2, students pair up to create area models for different rectangles. The entire lesson is complete with students in pairs or small groups to cultivate academic and student-to-student discourse.

Areas for Growth

- Materials do not consistently encourage the use of multiple representations to solve problems. In MATHia, Carnegie Learning's adaptive software platform that provides individualized practice and real-time feedback, students are limited to providing responses in a multiple-choice format or a short response format. In Grade 8, students have access to an equation editor with various features to help them, but materials do not include opportunities to use multiple representations (visual, physical, symbolic, contextual, linguistically inclusive, verbal) when solving problems or demonstrating understanding. While there are some instances of varied and scaffolded engagement, such as in Grade 7, Module 2, Topic 1, Lesson 5, students are directed to "draw a representation for each subtraction problem, then calculate the difference," and provided support for mathematical communication through visual modeling. The level of scaffolding across the materials is inconsistent. Chunking suggestions tend to be generic and supports for ELs and students with disabilities are offered inconsistently.

- Materials lack a comprehensive approach to fostering language development in academic discourse, particularly for ELs.

- Teachers will need to supplement the materials to provide explicit guidance on the use of technology. Materials lack clear support to help students understand the purpose and appropriate selection of mathematical tools, and do not consistently provide access to manipulatives or physical tools to support hands-on learning.

CLASSROOM APPLICATION

Accessibility for Students

Materials provide for varied means of accessing content, helping teachers meet the diverse needs of students with disabilities and those working above or below grade level. Although materials provide for varied means of demonstrating learning, select assessments are limited to multiple-choice or short-answer format. Materials do not include questions and tasks that elevate diverse cultures, identities, backgrounds, and perspectives. Additionally, materials do not provide guidance to encourage teachers to draw upon students' home language to facilitate learning or provide scaffolds for students at various levels of English language proficiency. Teachers will need to supplement materials to challenge existing narratives about historically marginalized and historically centered or normed cultures including challenges rooted in systemic oppression.

Strengths

- Materials provide for varied means of accessing content, helping teachers meet the diverse needs of students with disabilities and those working above or below grade level. In Grade 6, Module 3, Topic 1, Lesson 1, the "Additional Facilitation" section provides differentiated strategies for instruction for different student groups: all students, students working above grade level, and students working below grade level. All students annotate perfect squares, sums squared and the sum of squares to justify how models connect to the expressions. Students above grade level are prompted to investigate patterns in consecutive perfect square numbers, explain why the increase is the consecutive odd numbers, and connect the pattern in the diagram. For students working below grade level, the materials suggest reducing the number of model and expression cards while maintaining variety and keeping models that match. This guidance encourages all students to meaningfully participate in grade-appropriate content and tasks. Materials include multiple entry points for learning and leverage the strengths of all learners, including English learners. In Grade 8, Module 3, Topic 1, videos are provided as an intervention resource in English and Spanish, with additional activities that are aligned with MA-specific standards.

- Materials provide for varied means of demonstrating learning. In Grade 6, Module 2, Topic 1, Lesson 1, students are provided multiple means of representation and expression to display their knowledge of real-world problem solving. Students are given a basketball scoreboard with a halftime score and prompted to predict the score. This exploration of additive and multiplicative reasoning continues with

real-world verbal statements, such as "I think the final score will be double the score from halftime," which are translated into math expressions and evaluated by students. In Grade 7, Module 5, Topic 2, Lesson 2, students explore surface area by cutting out nets of two solid figures and filling these figures with birdseed to determine the volume of each. Through this hands-on experiment, students practice determining the volume formula for the pyramid. The module then progresses to activities that engage procedural fluency to calculate the volume of real-world pyramids.

Areas for Growth

- While materials provide for varied means of demonstrating learning, the "Ready Check" pre-assessments are limited in their depth of assessment as they are provided exclusively in multiple-choice answer formats. Teachers will need to supplement materials for student accessibility, with resources such as text-to-speech software and materials translated in multiple languages to meet the needs of diverse student populations.

- Teachers will need to supplement materials to ensure that students developing in English proficiency have access to grade-level content, cognitively demanding tasks, and opportunities to develop academic language in English. Although materials include a WIDA-alignment document with the WIDA ELD Standards for Mathematics, and each lesson is accompanied with a language strategy and goal, materials do not include consistent support specific to ELs. Recommended strategies for support of English proficiency are not scaffolded or differentiated for students at various levels of English proficiency. Materials do not provide guidance to encourage teachers to draw upon student home language to facilitate learning. The materials provide language support for students to learn math in English but there is no evidence of promoting home language knowledge as an asset to engage students in the content material or purposefully utilizing student home language in context with the materials (EdReports, 3S).

- Teachers will need to supplement materials to better engage students from diverse cultures, identities, backgrounds, and perspectives. In Grade 7, Module 5, Topic 2, Lesson 4, although students discuss the volume and surface areas of architectural innovations of pyramids around the world, this is one of the only mentions of non-Western culture within the materials. In the "Teacher Resource" for Grade 6, Module 3, materials do not include instructions for teachers to actively draw upon students' diverse backgrounds, aside from various references to multicultural male and female names. Materials also do not challenge existing narratives about historically marginalized and historically centered or normed cultures including challenges rooted in systemic oppression.

CLASSROOM APPLICATION

Usability for Teachers

Lessons and tasks follow a clear purpose and goal and support teachers with suggested classroom routines and structures. Materials include informal and formal assessments and guidance on how to measure learning. However, materials may require modification to be completed within a regular school year to accommodate testing or non-instructional days. Materials lack resources to help teachers set clear and high expectations for students and include limited guidance and resources designed specifically to build teachers' knowledge, particularly in support of learners at various levels of achievement or English language proficiency. Teachers will need to supplement materials to recognize their own biases and foster inclusive and culturally and linguistically sustaining practices.

Strengths

- Lessons and tasks advance student learning with clear purpose. Materials include standards correlation information that explains the role of the standards in the context of the overall series (EdReports, 3C). Student-facing lessons explicitly state the SMP or "Habits of Mind." The intended purpose of each lesson and task is clear, as the "Mathematical Arc" section of the "Teacher Implementation Guide" explains the sequence of activities related to the grade-level content and language covered in each module.

- Materials support teachers with suggested structures. Grouping strategies are given in the "Chunking the Activity" call out located in the margin of the "Teacher Implementation Guide" at the beginning of each activity. The facilitation guide encourages the use of peer learning and includes suggestions for grouping students in the "Additional Facilitation Notes." This resource recommends alternative grouping strategies, such as assigning each group a different problem to start with. Materials remind teachers that it is their responsibility to recognize collaborative opportunities and incorporate practices into daily routines. In Grade 6, Module 4, Topic 1, Lesson 1, students are given number lines created by Myron and Paulie. The "Teacher Implementation Guide" suggests an alternative grouping strategy to use the jigsaw method for this question wherein the class forms groups with four students per group. Each group should analyze Myron's or Paulie's number line before students regroup with two students who analyzed the other strategy and explain their number line to compare interpretations.

- Materials include informal and formal assessments that help teachers measure learning and adjust instruction. Embedded assessments provide multiple opportunities to determine students' learning and sufficient guidance to teachers for interpreting student performance and suggestions for follow-up. Answer keys are provided to determine students' learning and reports provide teachers' guidance on

interpreting student performance. Suggestions for follow-up are provided through LiveLab, which alerts the educator to students who may need additional support in specific skills, and the Skills Practice which provides suggestions on how students can re-engage with specific skills (EdReports, 3J). Each lesson in the material is structured such that it begins with "Engage" and "Develop" activities to activate prior knowledge and build conceptual understanding, and concludes with "Demonstrate" questions that assess students' independent mastery and synthesis of various clusters and/or domains of the standard. These assessments can be paired with intervention resources for re-engagement. Summative assessments are available as a digital resource in "MyCL," as PDFs or editable Microsoft Word documents. On Microsoft Word assessment documents, teachers are able to customize the assessment questions as they see fit. "Questions for Discourse" allow for informal assessment of student understanding, while Exit Tickets, Lesson Assignments, and aligned MATHia modules formally assess students and help identify student misconceptions and surface gaps in understanding.

Areas for Growth

- Materials lack suggested routines to support equitable and inclusive student participation; there is limited information provided for teachers on how to group students based on student needs. In Module 2, Topic 2, Lesson 1, the "Chunking the Activity" in the "Teacher Implementation Guide" directs teachers to "Read and discuss the directions and situation. Have students work individually to complete 1. Check-in and share. Group students to complete 2 and 3. Share and summarize." However, teachers are not provided guidance on the grouping format. Additionally, materials do not include resources to actively avoid potential bias in grouping strategies.

- Although pacing is flexible, materials may require modification to be completed within a regular school year to accommodate testing or non-instructional days. In Grade 7, there are 142 days of instructional material which include 103 MATHbook and 39 MATHia lessons with approximately 30 assessment days. This total instructional time of 172 days is very close to the 180 days of the year. Guidance is provided to make educated decisions for what resources and aspects of the lesson to be prioritized on a daily basis. Each module denotes lessons that must be prioritized using an asterisk. However, the pacing guide for each lesson includes a wide range of suggested time frames. Page FM-32-33 of the "Teacher Implementation Guide" suggests time frames for lesson components which total 25-50 minutes but do not include lesson assignments or mixed practice. Teachers will need to supplement materials to adjust pacing based on the needs of their students.

- Materials provide limited rubrics, exemplars, or other resources to help teachers set clear and high expectations for students. Although rubrics and sample answers are provided for select performance tasks and answer keys are provided for assessments, materials do not include checklists for students to assess peer work or self-assessments, nor any guidance for teachers to avoid bias in setting expectations for students. There is no clear guidance on expectations for students at performing below grade level.

Materials lack annotated student work at various levels of achievement, including non-exemplars, or student work at different levels of English development.

- Although materials include informal and formal assessments that help teachers measure learning, there is no clear guidance on how teachers should modify their instruction to address student needs effectively. In Grade 8, Module 2, Topic 2, Lesson 5, while examples of common misconceptions are provided, there is limited direction in terms of what scaffolding or support resources would be most appropriate to address these misconceptions.

- Materials include some guidance and resources aimed at building teachers' content and pedagogical knowledge. The "Teacher Implementation Guide" and facilitation materials break down lessons clearly, articulate the intent of each standard, connect to previously taught concepts, and offer entry points for new learning. These resources also include "look fors" and conversation starters to support instructional delivery and deepen teacher understanding. In Grade 8, Module 4, resources are provided to reinforce pedagogical and content knowledge through module-, topic-, and lesson-level support. The "Front Matter" of each course outlines instructional approaches for teachers, referencing research-based strategies. While the materials offer general guidance on how to enhance and adapt lessons for diverse learners, they lack explicit support for helping teachers recognize their own biases or develop sociocultural consciousness. Guidance on inclusive and culturally and linguistically sustaining practices—including race, language, ethnicity, and gender—is primarily located in the program's "Guiding Principles" and "Supports for All Students" sections. However, this guidance is broad and does not consistently provide actionable strategies for fostering equity or contextualizing historical and cultural perspectives in math instruction.

CLASSROOM APPLICATION

Impact on Learning

The curriculum demonstrates alignment to research-based practices.

WHAT THE PUBLISHER SAYS

We asked publishers for information on diverse representation in their materials, professional learning for Massachusetts educators, and product specifications. See what Carnegie Learning had to say about *Middle School Math Solution* (2022).

DIVERSE REPRESENTATION

Describe how you ensure that students of diverse races, ethnicities, nationalities, socioeconomic classes, family experiences, linguistic backgrounds, abilities, cultures, religions, genders, gender identities, sexual orientations, and other diverse social identity markers see themselves fully reflected, respected, and valued in your curriculum. Describe also how your curriculum challenges existing narratives about historically marginalized and historically centered or normed cultures, including challenges rooted in systemic oppression.

Examples of materials providing a balance of images or information about people representing various demographic and physical characteristics include:

- MATHia allows students to create an avatar. Students choose skin color, eye shape, hair color/style, and accessories representing a variety of physical characteristics.
- The materials include images on the Lesson Overview pages; however, the images often do not include people.

At Carnegie Learning, we engage students where they are. We aim to make math accessible to every student, regardless of background, by delivering equitable curricula and instruction. Word problems Carnegie Learning's Math Solution are written to reflect multiculturalism and include real-world scenarios and locations. Using proper names that reflect diverse cultures and situations found throughout the rural and urban United States reduces linguistic and cultural bias. We regularly evaluate our resources through external partnerships for bias and microaggression. All student characters in the instructional resources represent intelligent, curious learners with various interests. Our solutions support all students in the mathematics classroom, and extensive resources are provided for teachers in the TIG. Student scaffolds are provided throughout the student edition and MATHia software.

The materials provide teacher prompts that promote student appreciation of the perspective of others. The collaborative activities encourage students to appreciate diversity in perspectives, backgrounds, and cultures as they work together during the year. The research cited in Prompt 3 demonstrates the efficacy

THINK ABOUT. . .

How can you connect to students' cultural, social, and geographic backgrounds and encourage them to share experiences from their lives?

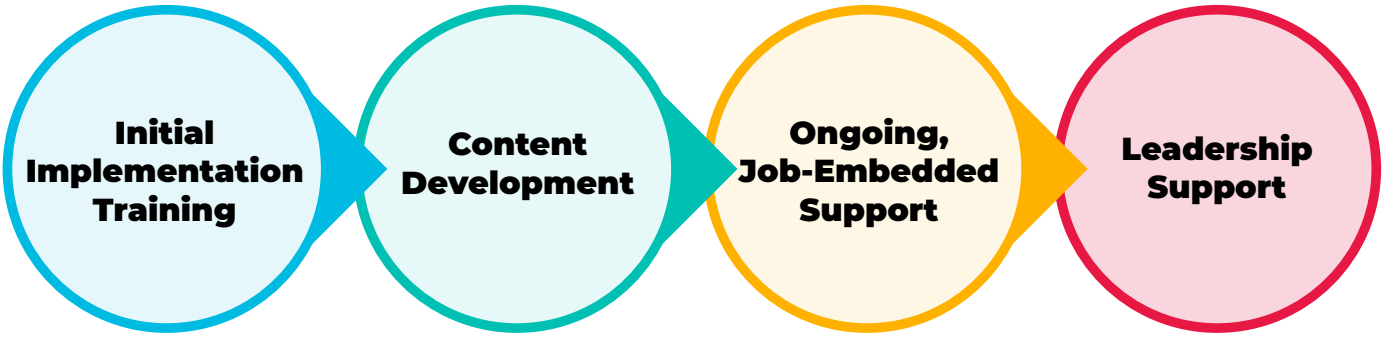
of our math solutions across traditionally marginalized populations. Development of these instructional materials, the intended implementation, and professional development support have always strived to incorporate tenets that support social and academic success.

Incorporating social-emotional learning prompts begins in the introductory lesson, *A Meeting of the Minds*. Interleaved notes on lesson pages provide teachers with point-of-use reminders. We provide an example of a Student Look-for teacher facilitation note. Teachers are reminded in the facilitation notes throughout the text to draw upon students' cultural and social backgrounds as they solve real-world problems.

PROFESSIONAL LEARNING

Describe any professional learning opportunities (materials or experiences, publisher-provided or otherwise) available for Massachusetts educators that are designed to support skillful implementation of your curriculum. If there are professional learning opportunities available specifically to support skillful use of the materials with English learners, students with disabilities, students working above or below grade level, and/or students of other diverse social identity markers, please include this information.

Carnegie Learning is committed to designing and delivering professional learning that aligns with its partners' learning standards and educational goals and offers educators a wide variety of experiences to meet the learning styles of all adult learners. Carnegie Learning's master practitioners provide participants multiple opportunities to engage in reflective practices, collaborate with other educators, create effective learning experiences using research-based strategies, and ultimately increase student achievement by improving classroom instruction quality. Four major components of our comprehensive professional learning plan fully support the district-wide implementation of our *Middle School Math Solution*.



Each component ensures success across all mathematics classrooms in partner districts.

- Initial Implementation Training ensures teachers and leaders are ready to begin with the *Middle School Math Solution* resources. Every teacher receives the support they need in both a workshop setting and an online environment where they can move at their own pace.
- Content Development provides just-in-time support designed to deepen each teacher's understanding of the mathematical content in their course and the arc of the mathematics across their grade band by previewing upcoming mathematical topics.

- Ongoing, Job-Embedded Support is sustained, in-classroom coaching and demonstration lessons designed to meet teachers where they are one-on-one or in small groups and ensure success during the implementation phase.
- Leadership Support ensures leaders and coaches are well-equipped with look-fors to support and coach their teachers and students and an understanding of the high-leverage strategies to propel their math instruction forward.
- MyPL+: MyPL+ offers a full suite of live and on-demand, personalized, virtual learning tools designed to support teachers where and when needed. Through MyPL+, teachers create their path of professional learning, choosing the content that best aligns with their personal and professional learning goals, the mode of learning that best fits their lifestyle, and the timeline that best fits their schedule. MyPL+ supports teachers using our resources along with our Doing the Math Content Development Series.
- MyCL: This is the central hub that provides teachers and leaders access to all products and resources
- LONG + LIVE + MATH: The National Institute: Our four-day institute brings together the smartest, most passionate educators and leaders to share insights and strategies around a common goal: to help every student reach their full potential in mathematics. LONG + LIVE + MATH is about transformation and the educators that make it happen. General attendees will enjoy a series of engaging keynotes, participant-driven sessions, and a wide variety of breakout workshops tailored to all grade bands (K–12). The Advanced Educator Workshop at TNI employs a rigorous training model for lead math teachers, district math coaches, math leaders, and coordinators who will support teachers using the Carnegie Learning resources in their districts.

We provide agendas and our full professional learning catalog for your review. Both documents can also be found here: https://tinyurl.com/4fnhm7j4

PRODUCT SPECIFICATIONS

Describe what a school or district needs to implement your curriculum successfully, including instructional hours and technological infrastructure. Provide basic information about what products are associated with the curriculum (e.g., what texts a typical purchase includes and/or what tools and resources are openly available online).

The *Middle School Math Solution* is a blended core mathematics program providing 180 days of instruction, individual learning, and assessment. The *Middle School Math Solution* includes everything students and teachers need for students to learn and master new skills, deepen their conceptual understanding, and apply their mathematics learning to the real world. Our flexible blended solution can meet the needs of a variety of scheduling scenarios, and can be purchased yearly or on a subscription basis. Technical requirements can be found here: https://tinyurl.com/55n6wx9y

Our blended *Middle School Math Solution* includes:

Student Materials

The MATHbook (Available in English or Spanish, in print or as a PDF) student edition offers:

- Lesson Overviews and Getting Started sequences to tap into prior knowledge.
- Connected learning sequences and activities that support student ownership of learning
- Talk the Talk formative assessments and Performance Tasks that allow students to demonstrate understanding.
- Assignment, Mixed Practice, and Skills Practice activities to promote student self-reflection and fluency.

MATHia (Available in English or Spanish) is the one-on-one math coaching software that cultivates a culture where asking for help is a regular practice. It promotes student self-reflection with the following tools:

- Step-by-Step Demonstrations and Concept Builder workspaces to focus on the development of concepts.
- On-Demand Hints that adjust to the individual problem-solving methods of each student.
- Just-in-Time Hints, so students receive personalized intervention at just the right time.

The Skills Practice Workbook (Available in English or Spanish, in print or as a PDF) allows students to engage with problems that target each lesson's skills, concepts, and applications, and to re-engage with each lesson for further exploration.

Teacher Materials

- Teacher's Implementation Guide (available in English or Spanish, in print or as a PDF)
- MATHia ReadyCheck Assessments and MATHbook Getting Ready sequences to gather and interpret data about student readiness
- Assessments: A set of summative tests that include pre and post test, end of topic tests, standardized practice tests, and performance tasks for each topic.
- Progress monitoring is supported through Questions to Support Discourse and Talk the Talk activities.
- MATHbook Summative Assessments include Pre- and Post-Tests, End of Topic Tests, Standardized Test questions, and Performance tasks.
- MyCL provides access to all resources and reports, as well as digital MATHbook, MATHia's LiveLab and reporting tools, digital lesson materials, online assessment engine, and professional learning resources.
- MyPL: Professional learning app that provides support for our Master Math practitioners, lesson prep videos, and a video library including: Professional Learning Implementation Training, Module Overview Videos, Topic Overview Videos, Lesson Overview Videos
- Instructional tools in MATHia provide guidance and support for teachers to collect, interpret, and act on data about student progress. MATHia reports include LiveLab, a live facilitation tool that gives real-time updates on student progress, setbacks, and activity in MATHia, reports that provide insight into the current overall progress of students as well as the projected end-of-year performance, detailed information about a group of students and their progress and performance across the entire syllabus, a day-to-day view of MATHia usage and clear insight into how students are spending their time, detailed information about each student's skill proficiency progress organized by module, unit, and workspace, and how students perform on specific standards, individually and as a group. We provide a link to the full component list here: https://tinyurl.com/munyzvju

RESPONSE TO REPORT

Carnegie Learning appreciates the opportunity to respond to the evaluation of our *Middle School Math Solution*. Our program is grounded in more than 25 years of cognitive science research and is highly rated by EdReports for focus, coherence, and usability. We continually update and enhance our materials to support effective mathematics learning for all students.

Our instructional resources develop conceptual understanding, procedural fluency, and real-world application in a coherent and intentional progression. Instruction emphasizes reasoning and sense-making, and we introduce organizational tools such as mnemonics only after students have built the underlying conceptual foundation. Our approach reflects a commitment to helping students think deeply about mathematics and apply that thinking in meaningful ways.

MATHia, our research-based learning software that mirrors the support of a one-to-one tutor, is a central component of this learning experience. MATHia uses model tracing, Bayesian Knowledge Tracing, and just-in-time feedback that responds directly to student misconceptions. Students work with multiple representations, guided examples, and dynamic tools that promote understanding and sustained engagement. MATHia's data insights and progress monitoring provide teachers with clear, actionable information about student learning.

Across the program, teachers have access to embedded differentiation strategies, common misconceptions, and assessments designed for students with varying skill levels. We are continually expanding scaffolds for multilingual learners and strengthening the range of culturally relevant contexts and supports in our materials.

Carnegie Learning is proud of the strong results districts achieve with our solutions and remains committed to supporting high-quality, inclusive mathematics instruction for Massachusetts educators and students.

Looking for more information?

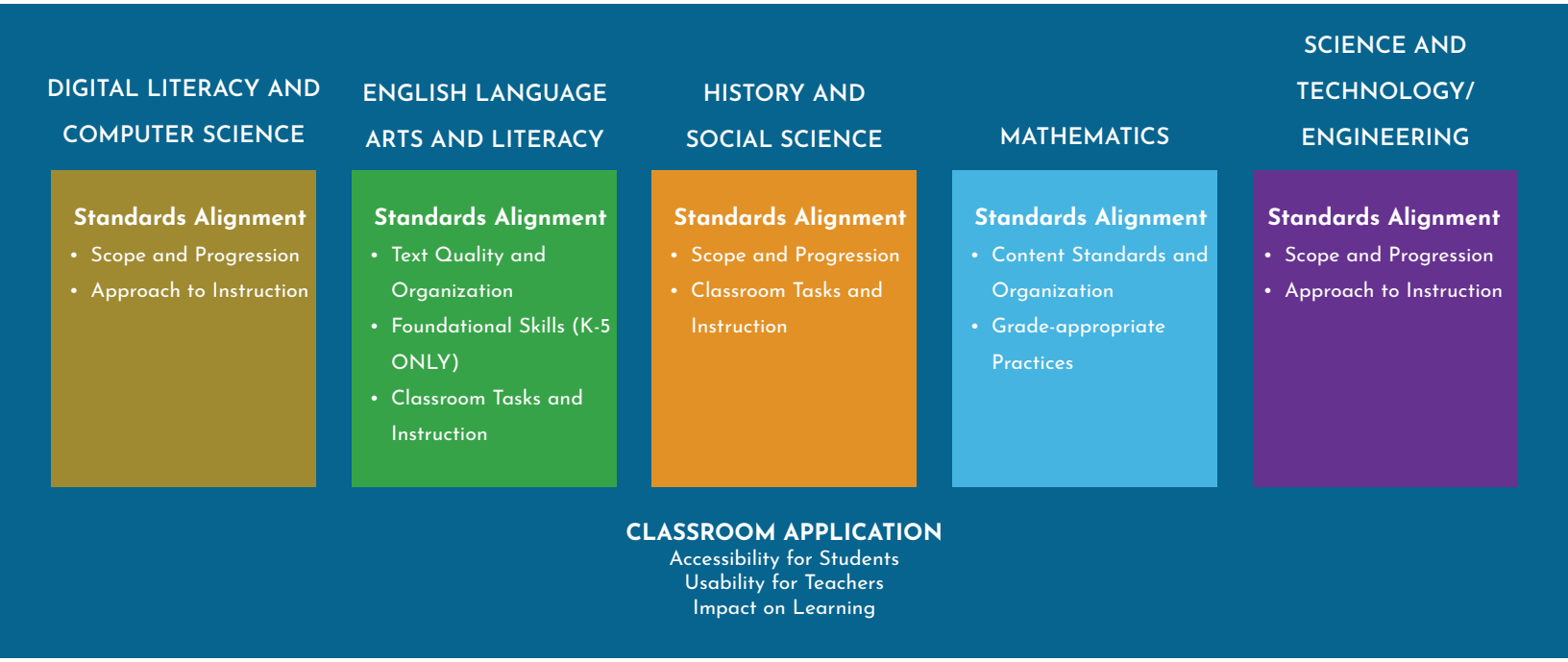
Read the full approved gateway review or find a Massachusetts district using this product.

Learn about the CURATE process and rubrics, or explore Frequently Asked Questions.

APPENDIX

CURATE REVIEWS AND REPORTS

Each CURATE panel uses a content-specific rubric to root their review of evidence of alignment and quality, coherent with the Massachusetts curriculum frameworks and Standards of Effective Teaching Practice. The content rubric guides each panel's review in two domains: Standards Alignment (specific to each content rubric) and Classroom Application (consistent across all content rubrics).



Standards Alignment: Materials eligible for a CURATE review have met a minimum threshold for alignment to national college and career-ready standards, which overlap with the Massachusetts standards, with a few MA differences in emphasis and priorities. These differences or priorities are captured in CURATE content rubric criteria and indicators (e.g., authentic application of grade-level language standards in ELA/Literacy, student academic discourse in mathematics, and affirming and valuing diverse identities, backgrounds, and perspectives in all content areas).

Panel Review Guiding Question: *What are the strengths and areas for growth in the materials when considering the extent to which they meet expectations for alignment to Massachusetts college- and career-ready content, practice, and English language development standards?*

Classroom Application: This domain pertains to how well the materials support diverse learners (e.g., students with disabilities, multilingual learners, students working above and below grade level, and students of other diverse identity markers) and the teachers – new and experienced – tasked with doing so (*see MA Effective Teaching Standards I and II*). Schools and districts in the process of investigating which available high-quality instructional materials (HQIM) would best serve and strongly support students and teachers based on their local assets, needs, and equity priorities should use the information in this domain as a starting place for identifying distinctions among standards-aligned products.

Panel Review Guiding Question: *What are the strengths and areas for growth in the materials when considering the extent to which they meet Massachusetts expectations for well serving and strongly supporting accessibility for diverse learners and usability for busy teachers? In other words, to what extent or degree will teachers need to adapt or supplement the materials to well serve the diverse learners and students in Massachusetts?*

Culturally and Linguistically Sustaining Practice: A cross-cutting concept across both the Standards Alignment and Classroom Application domains is Massachusetts' equity priorities (i.e., diversity in representation and perspectives, accessibility, inclusion), particularly for students from historically underserved groups and communities. CURATE panels' findings of what the materials include or provide to support teachers to implement Massachusetts' teaching and learning expectations (through design, approach, texts, tasks, practices, guidance, and resources within the core materials) are summarized in a table, followed by the narrative full report.

Panel Review Guiding Question: *To what extent do the materials meet expectations for alignment to Massachusetts college and career-ready content standards AND support inclusive and culturally & linguistically sustaining practices?*

CURATE RATINGS KEY

MEETS EXPECTATIONS: Most or all evidence indicates high quality; little to none indicates low quality. Materials may not be perfect, but Massachusetts teachers and students would be **well served and strongly supported** by them.

PARTIALLY MEETS EXPECTATIONS: Some evidence indicates high quality, while some indicates low quality. Teachers in Massachusetts would **benefit from having these materials** but need to supplement or adapt them substantively to serve their students well.

DOES NOT MEET EXPECTATIONS: Little to no evidence indicates high quality; most or all evidence indicates low quality. Materials **would not substantively help** Massachusetts teachers and students meet the state's expectations for teaching and learning.

NOT APPLICABLE (N/A): Materials are ***without* foundational skills** and will need to be *paired with* a strong foundational skills resource to address all components of the core literacy block (see Mass Literacy). This rating is provided only to ELA/Literacy K-5 Foundational Skills, when applicable.

NOT RATED: Narrative information is provided.