Model Curricula Alignment for Connecticut Mathematics

Resource Name: MidSchoolMath

Alignment Grade 7				
Model Unit Name	**Model Unit Standards**	**Resource Unit(s) Number**	**Resources Lessons**	**Pacing**
This is the title of the unit in the model curricula	*These are the standards addressed in the unit*	*This is the unit(s) that aligns with the model unit from the resource*	*These are the lessons from the identified units that align to the standards within the model unit*	*This is the expected number of days for instruction*
Operating with Rational Numbers (Addition & Subtraction)	7.NS.A.1, 7.NS.A.3	7.NS.A (partial)	7.NS.A.1a Ghost Tamers! 7.NS.A.1b Space Selfie 7.NS.A.1c Avalanche Pits 7.NS.A.1d Bad Accounting 7.NS.A.3 Chocolate Certified	≈ 20-25 days
Operating with Rational Numbers (Multiplication & Division)	7.NS.A.2, 7.NS.A.3, 7.EE.A.2, 7.EE.B.3	7.NS.A (partial) 7.EE.B (partial)	7.NS.A.2a Reverse Meditation 7.NS.A.2b Debt Division 7.NS.A.2c The Mastermind 7.NS.A.2d Grandpa's Journey 7.NS.A.3 Chocolate Certified 7.EE.A.2 A Taxing Problem 7.EE.B.3 Hay Talk	≈ 28-35 days
Two and Three Dimensional Geometry	7.G.A.2, 7.G.A.3, 7.G.B.4, 7.G.B.5, 7.G.B.6	7.G.A (partial) 7.G.B	7.G.A.2 The Triangle Sanctuary 7.G.A.3 Doctor Dilim's Dimensions 7.G.B.4 Crop Circle 7.G.B.5 Guarding the Great Gate 7.G.B.6 Miracle Mural	≈ 20-25 days

Proportional Reasoning	7.RP.A.1, 7.RP.A.2, 7.RP.A.3, 7.G.A.1	7.RP.A 7.G.A (partial)	7.RP.A.1 Candlelight Dinner 7.RP.A.2a Hot Sauce! 7.RP.A.2b Coffee Caravan 7.RP.A.2c Food Factor 7.RP.A.2d Doggy Diet	≈ 28-35 days
			7.RP.A.3 Sport Stats 7.G.A.1 Build a Bigger Box	
Algebraic Reasoning II	7.EE.A.1, 7.EE.A.2, 7.EE.B.4	7.EE.A 7.EE.B	7.EE.A.1 Mathmalian Logic 7.EE.A.2 A Taxing Problem 7.EE.B.4a Pen Perimeter 7.EE.B.4b The Fur Trader	≈ 16-20 days
Probability	7.SP.C.5, 7.SP.C.6, 7.SP.C.7, 7.SP.C.8,	7.SP.C	7.SP.C.5 Extraterrestrial Existence 7.SP.C.6 Snake Eyes 7.SP.C.7a Pirate's Prize 7.SP.C.7b Break Time 7.SP.C.8a-b Red Buffalo 7.SP.C.8c The Way of the Dragon	≈ 24-30 days
Inferences and Populations	7.SP.A.1, 7.SP.A.2, 7.SP.B.3, 7.SP.B.4	7.SP.A 7.SP.B	7.SP.A.1 Poll Position 7.SP.A.2 Slope Steepness 7.SP.B.3-4 Perio Charts	≈ 12-15 days

Scope and Sequence

If a district uses this resource to implement the state model curriculum for grade 7, the following scope and sequence should be followed to ensure alignment and attention to the progressions of mathematics.

<mark>***A district is welcome to use their own scope & sequence as well. The main consideration being would be the unit tests in this curriculum (Milestone Assessments) are aligned to the units below.*</mark>

Core Curriculum by MidSchoolMath is structured by grade, domain, cluster and standard levels. MidSchoolMath provides general guidelines for scope, sequence and pacing in the Teacher's Guide for each grade level (summarized below) to ensure that all standards for the grade level are included. Essential concepts (Major Clusters) are allotted additional time throughout the year. The sequence provided in the materials is specifically designed to provide a framework to allow teachers sufficient time for teaching each standard throughout the year. Additionally, the materials are intentionally designed for students to work with more 'concrete' forms of mathematics prior to abstract concepts. Finally, the structure of the curriculum is sequenced to allow for completion of topics before associated summative assessments, and sequencing within lessons progresses from conceptual work to practice with exercises. Core Curriculum by MidSchoolMath is based on estimated 36 weeks or 180 days per school year. Lessons typically take four days; if necessary for content coverage, they may be compressed to three days.

Districts using Core Curriculum may opt to use the Model Unit sequence instead and can order lessons as outlined in the crosswalk above.

Order	Unit Number/Title and Lessons	Lesson Objectives	# of days (assume 1 hour of instruction)	Number of weeks
Ratios & Proportional Reasoning	**7.RP.A** 7.RP.A.1 Candlelight Dinner 7.RP.A.2a Hot Sauce! 7.RP.A.2b Coffee Caravan 7.RP.A.2c Food Factor 7.RP.A.2d Doggy Diet 7.RP.A.3 Sport Stats	• Compute unit rates, including with ratios of fractions. • Recognize proportional relationships. • Identify the constant of proportionality in multiple representations. • Represent proportional relationships with equations. • Explain the meaning of (x, y) points on graphs of proportional relationships. • Use proportional relationships to solve multistep ratio and percent problems.	≈ 24-30 days	≈ 5-6 weeks

The Number System	7.NS.A 7.NS.A.1a Ghost Tamers! 7.NS.A.1b Space Selfie 7.NS.A.1c Avalanche Pits 7.NS.A.1d Bad Accounting 7.NS.A.2a Reverse Meditation 7.NS.A.2b Debt Division 7.NS.A.2c The Mastermind 7.NS.A.2d Grandpa's Journey 7.NS.A.3 Chocolate Certified	• Describe situations where opposite quantities combine to make 0. • Use a number line to add integers. •Interpret sums of rational numbers by describing realworld contexts. • Subtract integers by adding the additive inverse. • Show that the distance between two rational numbers on a number line is the absolute value of their difference. • Use properties of operations to add and subtract rational numbers.	≈ 36-45 days	≈ 7-9 weeks
		• Multiply signed numbers and interpret products in real-world contexts. • Divide signed numbers and interpret products in realworld contexts. • Use properties of operations to multiply and divide rational numbers. • Convert rational numbers to decimal form. • Know that decimal forms of rational numbers either terminate in 0 or repeat. • Solve problems involving the four operations with rational numbers.		

Expressions & Equations	**7.EE.A** 7.EE.A.1 Mathmalian Logic 7.EE.A.2 A Taxing Problem	• Use properties of operations to add, subtract, factor and expand linear expressions with rational coefficients. • Understand that writing expressions in different forms illuminates different relationships between the quantities.	≈ 8-10 days	≈ 2 weeks
	7.EE.B 7.EE.B.3 Hay Talk 7.EE.B.4a Pen Perimeter 7.EE.B.4b The Fur Trader	• Solve problems involving positive and negative rational numbers in any form. • Solve word problems leading to equations in the form of $px + q = r$ and $p(x + q) = r$. • Solve word problems leading to inequalities in the form of $px + q > r$ and $px + q < r$.	≈ 12-15 days	≈2-3 weeks

Geometry	**7.G.A** 7.G.A.1 Build a Bigger Box 7.G.A.2 The Triangle Sanctuary 7.G.A.3 Doctor Dilim's Dimensions	• Solve problems involving scale drawings of geometric figures. • Draw geometric shapes with given conditions (focus on triangles). • Describe 2-D figures that result from slicing a 3-D figure.	≈ 12-15 days	≈ 2-3 weeks
	7.G.B 7.G.B.4 Crop Circle 7.G.B.5 Guarding the Great Gate 7.G.B.6 Miracle Mural	• Know and use formulas for area and circumference of circles. • Use angle relationships to write equations and solve for an unknown angle in a figure. • Solve problems involving area, volume and surface area of 2-D and 3-D figures.	≈ 12-15 days	≈ 2-3 weeks

Statistics & Probability	**7.SP.A** 7.SP.A.1 Poll Position 7.SP.A.2 Slope Steepness	• Understand the need for random, representative sampling to study a population. • Use data from a random sample to draw inferences. • Use multiple samples to gauge variation in predictions.	≈ 8-10 days	≈ 2 weeks
	7.SP.B 7.SP.B.3-4 Perio Charts	• Informally assess the degree of visual overlap of two numerical data distributions.	≈ 4-5 days	≈ 1 week
	7.SP.C 7.SP.C.5 Extraterrestrial Existence 7.SP.C.6 Snake Eyes 7.SP.C.7a Pirate's Prize 7.SP.C.7b Break Time	• Understand that probability is expressed as a number between 0 and 1. • Approximate the probability of a chance event by collecting/observing data	≈ 24-30 days	≈ 5-6 weeks

	7.SP.C.8a-b Red Buffalo 7.SP.C.8c The Way of the Dragon	of the process that produces it. • Develop and use uniform probability models to determine probabilities of events. • Develop probability models, that may not be uniform, by observing data generated from a chance process. • Understand probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. • Design and use a simulation to generate frequencies for compound events.		

Supports of Diversity, Equity and Inclusion

Please provide any information relative to supporting culturally responsive instruction, multi-language learners, and students with disabilities

From a high-level perspective, *Core Curriculum* has been designed to allow **all students** to engage in learning grade-level math standards. *The Math Simulator* is intentionally designed, and placed prior to teacher instruction, so that students have the freedom to enter into the problem where they are. Students are specifically encouraged to conceive of multiple solutions and solution paths. Collaboration is encouraged, with a focus and emphasis on using processes and strategies over rushing to arrive at an answer.

Each *Detailed Lesson Plan* provides lesson-specific recommendations for differentiation, in two places. The "Strategies for Supporting Diverse Learners" Chart found in each *Detailed Lesson Plan* provides accommodations, modifications and extensions for that lesson to use with EL and special populations, including supporting students with skill gaps and special education needs, and those identified as gifted. The "Practice Printable Differentiation Plan" provides recommendations for remediation, practice and enrichment to meet the needs of all students. Resources to support these students are further embedded and integrated within *Core Curriculum*, such as *Test Trainer Pro* and *Mathematical Language Routines*.

All *Detailed Lesson Plans* also contain at least one strategy around **Mathematical Language Routines (MLRs)** for each lesson standard; these MLRs apply to all students but are particularly beneficial for English Language Learners. An overview on using MLRs, and a professional development module on MLRs, can be accessed within the system from the Teacher Dashboard.

Test Trainer Pro allows for students to practice math items in every domain at their own ability level, be that at grade level, below grade level, or above grade level. Teachers have access to lessons from all grade levels 5-8, which can be used to assign specific lessons outside of the current course with individual students or groups of students, as needed.

Videos are closed captioned in English and also have the option of Spanish subtitles to support EL and students who are deaf or hard of hearing. Highcontrast text is used throughout and can be resized by users; images can also be doubled in size. Users have the ability to adjust and adapt background colors and sizes through browser settings, for improved accessibility, and content works with common Chrome extensions to further accessibility.

To support schools and districts with large populations of Spanish-speakers, MidSchoolMath publishes Spanish-language versions of all student materials and has built in Spanish-language subtitles for all videos. The Spanish-language print materials can be accessed online (alongside Englishlanguage materials) or districts may opt to purchase *Student Workbooks (Spanish Edition)*. All Spanish-language materials were created through a professional translation process, undertaken by humans and overseen by Spanish-speaking educators, to ensure authenticity and understanding.