

Connecticut Mathematics Model Curriculum Alignment

Resource Name:HMH Into Math Grade 8

Alignment Grade 8

Model Unit Name	Model Unit Standards	Resource Unit(s) Number	Resources Lessons	Pacing
<i>This is the title of the unit in the model curricula</i>	<i>These are the standards addressed in the unit</i>	<i>This is the unit(s) that aligns with the model unit from the resource</i>	<i>These are the lessons from the identified units that align to the standards within the model unit</i>	<i>This is the expected number of days for instruction</i>
Real Numbers	8.NS.A.1 8.NS.A.2 8.EE.A.1 8.EE.A.2 8.EE.A.3 8.EE.A.4	Module 10 Module 10 Module 12 Module 10 Module 12 Module 12	10.1 10.3 12.1 10.2 12.2 12.3	2 Days 2 Days 2 Days 2 Days 2 Days 2 Days
Pythagorean Theorem	8.EE.A.2 8.G.B.6 8.G.B.7 8.G.B.8	Module 10 Module 11 Module 11 Module 11	10.2 11.1, 11.2 11.1, 11.2, 11.3 11.4	2 Days 4 Days 1 Week 1 Day 2 Days
Congruence and Similarity	8.G.A.1 8.G.A.2 8.G.A.3 8.G.A.4 8.G.A.5	Module 1 Module 1 Modules 1 & 2 Module 2 Module 4	1.1, 1.2, 1.3, 1.4 1.5 1.2, 1.3, 1.4, 1.5, 2.1, 2.2 2.3 4.1, 4.2, 4.3	1 Week 3 Days 2 Days 2 Weeks 2 Days 2 Days 1 Week 1 Day

Linear Relationships	8.EE.B.5 8.EE.B.6 8.EE.C.7 8.F.A.1 8.F.A.2 8.F.A.3 8.F.B.4 8.F.B.5	Module 5 Modules 5 & 6 Module 3 Module 6 Module 6 Module 6 Modules 6 & 8 Module 6	5.2, 5.3, 5.4 5.1, 5.2, 6.2 3.1, 3.2, 3.3 6.1 6.5 6.2 6.3, 6.4, 8.3 6.6	1 Week 1 Day 1 Week 1 Day 1 Week 1 Day 2 Days 2 Days 2 Days 1 Week 1 Day 2 Days
Systems of Linear Relationships	8.EE.C.7 8.EE.C.8 8.F.A.2 8.F.B.4	Module 3 Module 7 Module 6 Modules 6 & 8	3.1, 3.2, 3.3 7.1, 7.2, 7.3, 7.4, 7.5, 7.6 6.5 6.3, 6.4, 8.3	1 Week 1 Day 2 Weeks 2 Days 2 Days 1 Week 1 Day
Volume	8.G.C.9	Module 13	13.1, 13.2, 13.3, 13.4	1 Week 3 Days

Patterns in Data	8.SP.A.1 8.SP.A.2 8.SP.A.3 8.SP.A.4	Module 8 Module 8 Module 8 Module 9	8.1 8.2 8.3 9.1, 9.2, 9.3	2 Days 2 Days 2 Days 1 Week 1 Day
------------------	--	--	------------------------------------	--

Scope and Sequence

If a district uses this resource to implement the state model curriculum for grade 8, the following scope and sequence should be followed to ensure alignment and attention to the progressions of mathematics.

Order	Unit Number/Title and Lessons	Lesson Objectives	Number of Days (Assume 1 Hour of Instruction)	Number of Weeks
1	Lesson 1.1 Investigate Transformations	Explore and observe the effects of rigid motions on a figure.	2	
2	Lesson 1.2	Describe translations	2	

	Explore Translations	and their effects on a figure.		
3	Lesson 1.3 Explore Reflections	Describe reflections and their effects on a figure.	2	
4	Lesson 1.4 Explore Rotations	Recognize and perform rotations. Describe rotations algebraically. Understand that rotating a figure produces an image that is congruent to the preimage.	2	
5	Lesson 1.5 Understand and Recognize Congruent Figures	Perform and describe sequences of transformations on figures.	2	Module 1 2 Weeks
6	Lesson 2.1 Investigate Reductions and Enlargements	Perform enlargements and reductions. Understand that the result of enlarging or reducing a preimage is not congruent to the preimage.	2	
7	Lesson 2.2 Explore Dilations	Describe and apply the properties of dilations. Understand and find the scale factor and center of dilation, both on and off the coordinate plane.	2	

8	Lesson 2.3 Understand and Recognize Similar Figures	Recognize and make the similar figures using dilations.	2	Module 2 1 Week 1 Day
9	Lesson 3.1 Solve Multi-step Linear Equations	Use algebraic properties to solve one-variable linear equations.	2	
10	Lesson 3.2 Examine Special Cases	Recognize and interpret linear equations that have no solution or infinitely many solutions.	2	
11	Lesson 3.3 Apply Linear Equations	Solve and apply linear equations in one variable.	2	Module 3 1 Week 1 Day
12	Lesson 4.1 Develop Angle Relationships for Triangles	Use angle relationships in triangles.	2	
13	Lesson 4.2 Investigate Angle-Angle Similarity	Identify whether two triangles are similar, given angle measures in the triangles.	2	
14	Lesson 4.3 Explore Parallel Lines Cut by a Transversal	Find missing angle measures when parallel lines are cut by a transversal.	2	Module 4 1 Week 1 Day
15	Lesson 5.1 Explain Slope with Similar Triangles	Relate right triangles to the coordinates of a line going through the origin, and compare persistent	2	

		features of the triangles to persistent features of the line.		
16	Lesson 5.2 Derive $y = mx$	Write the equation of a proportional relationship.	2	
17	Lesson 5.3 Interpret and Graph Proportional Relationships	Graph proportional relationships. Interpret unit rate as the slope of the graph of a proportional relationship.	2	
18	Lesson 5.4 Compare Proportional Relationships	Demonstrate and interpret proportional relationships between quantities.	2	Module 5 1 Week 3 Days

19	Lesson 6.1 Understand and Graph Functions	Visually display a relationship between two variables.	2	
20	Lesson 6.2 Derive and Interpret $y = mx + b$	Write the equation of a linear function.	2	
21	Lesson 6.3 Interpret Rate of Change and Initial Value	Interpret the slope and y-intercept of a line.	2	
22	Lesson 6.4 Construct Functions	Construct a function to model a linear relationship.	2	
23	Lesson 6.5 Compare Functions	Use tables, graphs, and equations to	2	

		compare functions.		
24	Lesson 6.6 Describe and Sketch Nonlinear Functions	Sketch and analyze a graph that exhibits the qualitative features of a function.	2	Module 6 2 Weeks 2 Days
25	Lesson 7.1 Represent Systems by Graphing	Interpret the graphical representation of two linear equations.	2	
26	Lesson 7.2 Solve Systems by Graphing	Solve a system of two linear equations by graphing.	2	
27	Lesson 7.3 Solve Systems by Substitution	Use substitution to solve a system of two linear equations.	2	
28	Lesson 7.4 Solve Systems by Elimination	Use elimination to solve a system of two linear equations.	2	
29	Lesson 7.5 Examine Special Systems	Recognize and interpret systems of two linear equations that have no solution or infinitely many solutions.	2	
30	Lesson 7.6 Apply Systems of Equations	Use systems of two linear equations to solve real-world problems.	2	Module 7 2 Weeks 2 Days
31	Lesson 8.1 Construct Scatter Plots and Examine Association	Display and analyze data with two variables.	2	

32	Lesson 8.2 Draw and Analyze Trend Lines	Use trend lines to describe a linear relationship between two variables.	2	
33	Lesson 8.3 Interpret Linear Data in Context	Use scatter plots and trend lines to interpret linear data in context.	2	Module 8 1 Week 1 Day
34	Lesson 9.1 Construct and Interpret Two-Way Frequency Tables	Interpret data by constructing two-way frequency tables.	2	
35	Lesson 9.2 Construct Two-Way Relative Frequency Tables	Construct two-way relative frequency tables.	2	
36	Lesson 9.3 Interpret Two-Way Relative Frequency Tables	Interpret and analyze data using two-way relative frequency tables.	2	Module 9 1 Week 1 Day
37	Lesson 10.1 Understand Rational and Irrational Numbers	Determine if a number is rational.	2	
38	Lesson 10.2 Investigate Roots	Evaluate square and cube roots.	2	
39	Lesson 10.3 Order Real Numbers	Order a list of real numbers consisting of both rational and irrational numbers.	2	Module 10 1 Week 1 Day

40	Lesson 11.1 Prove the Pythagorean Theorem	Prove and use the Pythagorean Theorem.	2	
41	Lesson 11.2 Prove the Converse of the Pythagorean Theorem	Prove and apply the Pythagorean Theorem and its converse.	2	
42	Lesson 11.3 Apply the Pythagorean Theorem	Use the Pythagorean Theorem to solve real-world problems involving right triangles.	2	
43	Lesson 11.4 Apply the Pythagorean Theorem in the Coordinate Plane	Use the Pythagorean Theorem to determine distance between any two points in the coordinate plane.	2	Module 11 1 Week 3 Days

44	Lesson 12.1 Know and Apply Properties of Exponents	Develop and use the properties of integer exponents.	2	
45	Lesson 12.2 Understand Scientific Notation	Express numbers using scientific notation.	2	
46	Lesson 12.3 Compute with Scientific Notation	Compute with numbers written in scientific notation.	2	Module 12 1 Week 1 Day
47	Lesson 13.1 Find Volume of Cylinders	Develop and use the formula for the volume of a cylinder.	2	
48	Lesson 13.2	Develop and use the	2	

	Find Volume of Cones	formula for the volume of a cone.		
49	Lesson 13.3 Find Volume of Spheres	Develop and use the formula for the volume of a sphere.	2	
50	Lesson 13.4 Apply Volume	Use volume formulas to solve problems involving cylinders, cones, and spheres.	2	Module 13 1 Week 3 Days

Supports of Diversity, Equity and Inclusion
<i>Please provide any information relative to supporting culturally responsive instruction, multi-language learners, and students with disabilities</i>

Into Math is a comprehensive instructional program that is specifically designed to support the diverse needs of all students, including those who are culturally and linguistically diverse, as well as those with disabilities. The program is built on a foundation of research-based instructional strategies and provides a wealth of resources for teachers to support the learning of all students.

One of the key features of the program is the inclusion of learning mindset prompts, which encourage students to develop a growth mindset and believe in their ability to succeed in math. These prompts are integrated throughout the program and provide students with the tools they need to persevere through challenges and become confident and successful learners.

In addition to the learning mindset prompts, the program also includes guiding questions and supports for teachers to identify students who may require additional assistance. This allows teachers to provide targeted support and interventions to those students who need it most. The program also provides detailed information on students' prior learning, current development, and future connections to be made, which enables teachers to differentiate instruction effectively.

The program places a strong emphasis on language development and provides teachers with a variety of resources, such as Three Reads, which support sense making, and suggestions for connecting language to various concepts, as well as key academic vocabulary for each module. These resources are designed to help teachers support the language development of multilingual learners and ensure that they have the language skills they need to access the math curriculum.

Additionally, the program is designed to be culturally responsive and inclusive to all students. It provides teachers with resources and strategies to address cultural and linguistic diversity, and strategies for building positive relationships with students. This approach to instruction acknowledges and values the cultures, languages, and backgrounds of all students and helps to create an inclusive and equitable learning environment.

Furthermore, the program offers a range of interventions, additional practice, and math center options to support students with differing learning needs. These interventions are designed to provide students with additional support and practice in areas where they may be struggling, and the math center options provide students with hands-on, interactive activities that help to make math more engaging and accessible.

Overall, Into Math is a highly effective instructional program that is well-equipped to support the diverse needs of all students. The program's comprehensive approach, which includes a focus on learning mindset, language development, and interventions for students with special needs, ensures that all students have the support they need to succeed in math. Furthermore, the program is designed to be flexible, allowing teachers to differentiate instruction to meet the unique needs of their students, and provide targeted support to students who may be

struggling.