

SY - SCOPE & SEQUENCE CHART: INTENDED UNITS OF STUDY, 2022-2023
CONTENT AREA: Math - GRADE LEVEL: 7 - ACCELERATED

NOTE: THERE WILL BE A PROJECT ASSOCIATED WITH EACH UNIT OF STUDY UNLESS TIME PROHIBITS

UNIT	APPROXIMATE TIME FRAME	TEXT(S)/RESOURCES	TARGETED UNDERSTANDING (PURPOSE)	CONTENT STANDARD(S) (CCSS for Mass.)
1. Adding & Subtracting Rational Numbers	TRIMESTER 1 2 weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Understand absolute values and ordering of rational numbers. • Find sums of integers. • Find sums of rational numbers. • Find differences of integers. • Find differences of rational numbers and find distances between numbers on a number line. 	7.NS.A.1a, 7.NS.A.1b, 7.NS.A.1c, 7.NS.A.1d, 7.NS.A.3
2. Multiplying & Dividing Rational Numbers	TRIMESTER 1 2 weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Find products of integers. • Find quotients of integers. • Convert between different forms of rational numbers. • Find products of rational numbers. • Find quotients of rational numbers. 	7.NS.A.2a, 7.NS.A.2b, 7.NS.A.2c, 7.NS.A.2d, 7.NS.A.3
3. Expressions	TRIMESTER 1 1 ½ weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Simplify algebraic expressions. • Find sums and differences of linear expressions. • Apply the Distributive Property to generate equivalent expressions. • Factor algebraic expressions. 	7.EE.A.1, 7.EE.A.2

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4. Equations & Inequalities	TRIMESTER 1 2 ½ weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Write and solve equations using addition or subtraction. • Write and solve equations using multiplication or division. • Write and solve two-step equations. • Write inequalities and represent solutions of inequalities on number lines. • Write and solve inequalities using addition or subtraction. • Write and solve inequalities using multiplication or division. • Write and solve two-step inequalities. 	7.EE.B.4a, 7.EE.B.4b
5. Ratios & Proportions	TRIMESTER 1 4 weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Understand ratios of rational numbers and use ratio tables to represent equivalent ratios. • Understand rates involving fractions and use unit rates to solve problems • Determine whether two quantities are in a proportional relationship • Use proportions to solve ratio problems. • Represent proportional relationships using graphs and equations. • Solve problems involving scale drawings. 	7.RP.A.1, 7.RP.A.2a, 7.RP.A.2b, 7.RP.A.2c, 7.RP.A.2d, 7.RP.A.3, 7.G.A.1
6. Percents	TRIMESTER 1 - 2 2 weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Rewrite fractions, decimals, and percents using different representations. • Use the percent proportion to find missing quantities. • Use the percent equation to find missing quantities. • Find percents of change in quantities. • Solve percent problems involving discounts and markups. • Understand and apply the simple interest formula. 	7.RP.A.3, 7.EE.B.3

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7. Probability	TRIMESTER 2 2 weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Understand how the probability of an event indicates its likelihood. • Develop probability models using experimental and theoretical probability. • Find sample spaces and probabilities of compound events. • Design and use simulations to find probabilities of compound events. 	7.SP.C.5, 7.SP.C.6, 7.SP.C.7a, 7.SP.C.7b, 7.SP.C.8a, 7.SP.C.8b, 7.SP.C.8c
8. Statistics	TRIMESTER 2 2 weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Understand how to use random samples to make conclusions about a population. • Understand variability in samples of a population. • Compare populations using measures of center and variation. • Use random samples to compare populations. 	7.SP.A.1, 7.SP.A.2, 7.SP.B.3, 7.SP.B.4
9. Geometric Shapes & Angles	TRIMESTER 2 2 weeks: proposed	Big Ideas! Mat Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Find the circumference of a circle. • Find the area of a circle. • Find perimeters and areas of composite figures. • Construct a polygon with given measures. • Use facts about angle relationships to find unknown angle measures. 	7.G.A.2, 7.G.B.4, 7.G.B.5, 7.G.B.6
10. Surface Area & Volume	TRIMESTER 2 2 weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Find the surface area of a prism. • Find the surface area of a cylinder. • Find the surface area of a pyramid. • Find the volume of a prism. • Find the volume of a pyramid. • Describe the cross sections of a solid. 	7.G.A.3, 7.G.B.4, 7.G.B.6

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11. Transformations	TRIMESTER 2 2 weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Translate figures in the coordinate plane. • Reflect figures in the coordinate plane. • Rotate figures in the coordinate plane. • Understand the concept of congruent figures. • Dilate figures in the coordinate plane. • Understand the concept of similar figures. • Find perimeters and areas of similar figures. 	8.G.A.1, 8.G.A.2, 8.G.A.3, 8.G.A.4
12. Angles & Triangles	TRIMESTER 2 1 ½ weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Find missing angle measures created by the intersections of lines. • Understand properties of interior and exterior angles of triangles. • Find interior angle measures of polygons. • Use similar triangles to find missing measures. 	8.G.A.5
13. Graphing & Writing Linear Equations	TRIMESTER 2 - 3 2 weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Graph linear equations. • Find and interpret the slope of a line. • Graph proportional relationships. • Graph linear equations in slope-intercept form. • Graph linear equations in standard form. • Write equations of lines in slope-intercept form. • Write equations of lines in point-slope form. 	8.EE.B.5, 8.EE.B.6, 8.F.B.4

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14. Exponents & Scientific Notation	TRIMESTER 3 2 ½ weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Use exponents to write and evaluate expressions. • Generate equivalent expressions involving products of powers. • Generate equivalent expressions involving quotients of powers. • Understand the concepts of zero and negative exponents. • Round numbers and write the results as the product of a single digit and a power of 10. • Understand the concept of scientific notation. • Perform operations with numbers written in scientific notation. 	8.EE.A.1, 8.EE.A.3, 8.EE.A.4
15. Real Numbers & the Pythagorean Theorem	TRIMESTER 3 2 weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Understand the concept of a square root of a number. • Understand the Pythagorean Theorem. • Understand the concept of a cube root of a number. • Convert between different forms of rational numbers. • Understand the concept of irrational numbers. • Understand the converse of the Pythagorean Theorem. 	8.NS.A.1, 8.NS.A.2, 8.EE.A.2, 8.G.B.6, 8.G.B.7, 8.G.B.8
16. Volume & Similar Solids	TRIMESTER 3 1 ½ weeks: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> • Find the volume of a cylinder. • Find the volume of a cone. • Find the volume of a sphere. • Find the surface areas and volumes of similar solids. 	8.G.C.9

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AT1. Solving Multit-Step Equations	TRIMESTER 3 1 day: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> ● Apply properties to produce equivalent equations. ● Solve multi-step equations. ● Use multi-step equations to model and solve real-life problems. 	8.EE.C.7a, 8.EE.C.7b
AT2. Solving Equations With Variables on Both Sides	TRIMESTER 3 1 day: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> ● Explain how to solve an equation with variables on both sides. ● Determine whether an equation has one solution, no solution, or infinitely many solutions. ● Use equations with variables on both sides to model and solve real-life problems. 	8.EE.C.7a, 8.EE.C.7b
AT3. Rewriting Equations & Formulas	TRIMESTER 3 1 day: proposed	Big Ideas! Math Grade 7 ACCEL: MRL CC 2022	<ul style="list-style-type: none"> ● Use properties of equality to rewrite literal equations. ● Use a formula to convert temperatures. 	8.EE.C.7