



CONNECTICUT HIGH-DOSAGE TUTORING

High-Impact Tutoring Plan

Mathematics . Grades 6 to 10

Prepared for the Connecticut State Department of Education

High-Dosage Tutoring Program | Delivered by Paper Education



MATHEMATICS . GRADES 6 TO 10

Program Overview

Connecticut High-Dosage Tutoring

This program provides small-group, standards-aligned mathematics tutoring for students in grades 6 to 10 who are performing below grade level. The sections below define how students are selected, how tutoring is delivered, and how progress is measured. Each grade-band plan that follows applies this design.

Student Identification

Students in grades 6 to 10 performing below grade level in mathematics are identified using existing district data, with no new testing required. Selection draws on district benchmark assessments such as i-Ready, NWEA MAP, or STAR, state assessment results, course performance, and teacher recommendation, applied within the district's MTSS framework. Priority is given to students whose data shows unfinished learning in the prerequisite skills for their grade's core standards. Cohorts are finalized with district and school leaders, honoring local MTSS processes and educator discretion.

Dosage and Structure

The program delivers three 30-minute sessions per week, 90 minutes of tutoring weekly, across a 12-week cycle. Students work in small groups of up to three with the same trained W-2 tutor for the full program, preserving instructional and relational continuity. Sessions are embedded in the school day whenever possible and aligned to district pacing so tutoring reinforces Tier 1 classroom instruction. This dosage meets the intensity threshold set by the National Student Support Accelerator (NSSA) framework for high-impact tutoring.

Progress Monitoring

Progress is measured across the full cycle. A standards-aligned baseline sets each student's starting point before instruction begins. Session-level exit tickets check mastery of each day's objective. Summative check-ins every four weeks measure broader growth and inform grouping adjustments. A post-assessment at completion provides the evidence base for district reporting. Where available, district benchmark and state assessment data are incorporated to validate outcomes alongside the program's internal measures. District leaders have real-time visibility through the progress monitoring dashboard and structured mid-program and end-of-program reviews.



HIGH-IMPACT TUTORING PLAN

High-Impact Tutoring Plan

Connecticut

Grade 6 Mathematics

This plan is built on Connecticut state standards and reflects the design of a GROW High-Impact Tutoring mathematics program. The scope and sequence is finalized to the district's adopted curriculum, pacing guides, and instructional priorities during program design.

A 12-week program that strengthens sixth grade students in ratio reasoning, rational number fluency, and early algebraic thinking. The sequence moves from ratios and operations to expressions, equations, geometry, and data, so each concept supports the next.

Dosage and duration. The program provides three 30-minute sessions per week, 90 minutes of tutoring weekly, across a 12-week cycle, in small groups of up to three students. Each student works with the same consistent W-2 tutor throughout. This dosage and duration reflects the science of high-impact tutoring, aligned to the National Student Support Accelerator (NSSA) framework.

12-Week Scope and Sequence

Week 1	Ratio Concepts. Understand ratio language and represent ratio relationships between quantities.
Week 2	Unit Rates. Find unit rates and use them to solve real-world problems.
Week 3	Percent Problems. Find a percent of a quantity and solve basic percent problems.
Week 4	Dividing Fractions. Divide fractions by fractions and interpret the quotients in context.
Week 5	Decimal Operations. Add, subtract, multiply, and divide multi-digit decimals fluently.
Week 6	Factors and Multiples. Find greatest common factors and least common multiples.
Week 7	Integers and Rational Numbers. Understand positive and negative numbers and their positions on the number line.
Week 8	The Coordinate Plane. Plot points with rational coordinates in all four quadrants.
Week 9	Algebraic Expressions. Write, read, and evaluate expressions with variables and exponents.
Week 10	One-Variable Equations. Solve one-step equations and interpret their solutions.
Week 11	Area, Surface Area, and Volume. Find the area of polygons and the volume of rectangular prisms.
Week 12	Statistics and Review. Summarize data with measures of center and apply skills to a performance task.

Standards alignment. This plan aligns to Connecticut Core Standards for Grade 6 Mathematics across ratios and proportional relationships, the number system, expressions and equations, geometry, and statistics. Lessons target the prerequisite skills students need to reach grade-level proficiency while reinforcing current classroom instruction. Final scope and sequence are aligned to the district's adopted curriculum and pacing guides during the design phase.



HIGH-IMPACT TUTORING PLAN

High-Impact Tutoring Plan

Connecticut

Grade 7 Mathematics

This plan is built on Connecticut state standards and reflects the design of a GROW High-Impact Tutoring mathematics program. The scope and sequence is finalized to the district's adopted curriculum, pacing guides, and instructional priorities during program design.

A 12-week program that strengthens seventh grade students in rational number reasoning and proportional thinking, the ideas that anchor the grade. The sequence moves from computation to equations, geometry, and data, so each concept supports the next.

Dosage and duration. The program provides three 30-minute sessions per week, 90 minutes of tutoring weekly, across a 12-week cycle, in small groups of up to three students. Each student works with the same consistent W-2 tutor throughout. This dosage and duration reflects the science of high-impact tutoring, aligned to the National Student Support Accelerator (NSSA) framework.

12-Week Scope and Sequence

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| Week 1 | Integer Operations. Add and subtract rational numbers, including integers, using number lines and properties. |
| Week 2 | Multiplying and Dividing Rationals. Multiply and divide rational numbers and interpret the results in context. |
| Week 3 | Proportional Relationships. Recognize and represent proportional relationships between quantities. |
| Week 4 | Constant of Proportionality. Identify and use the constant of proportionality in tables, graphs, and equations. |
| Week 5 | Percent Applications. Solve multistep percent problems including tax, tip, markup, and percent change. |
| Week 6 | Equivalent Expressions. Apply properties to add, subtract, factor, and expand linear expressions. |
| Week 7 | Solving Equations. Solve two-step equations and interpret solutions in context. |
| Week 8 | Solving Inequalities. Solve and graph two-step inequalities and interpret their solutions. |
| Week 9 | Scale and Geometry. Use scale drawings and proportional reasoning to find lengths and areas. |
| Week 10 | Area, Surface Area, and Volume. Solve problems involving area, surface area, and volume of figures. |
| Week 11 | Statistics and Sampling. Use representative samples and measures of center to draw comparisons. |
| Week 12 | Probability and Review. Reason about likelihood and apply skills to a mixed performance task. |

Standards alignment. This plan aligns to Connecticut Core Standards for Grade 7 Mathematics across proportional relationships, operations with rational numbers, expressions and equations, geometry, and statistics and probability. Lessons target the prerequisite skills students need to reach grade-level proficiency while reinforcing current classroom instruction. Final scope and sequence are aligned to the district's adopted curriculum and pacing guides during the design phase.



HIGH-IMPACT TUTORING PLAN

High-Impact Tutoring Plan

Connecticut

Grade 8 Mathematics

This plan is built on Connecticut state standards and reflects the design of a GROW High-Impact Tutoring mathematics program. The scope and sequence is finalized to the district's adopted curriculum, pacing guides, and instructional priorities during program design.

A 12-week program that prepares eighth grade students for high school mathematics through linear reasoning, functions, and geometry. The sequence builds from exponents and equations to functions and the Pythagorean Theorem, so each concept supports the next.

Dosage and duration. The program provides three 30-minute sessions per week, 90 minutes of tutoring weekly, across a 12-week cycle, in small groups of up to three students. Each student works with the same consistent W-2 tutor throughout. This dosage and duration reflects the science of high-impact tutoring, aligned to the National Student Support Accelerator (NSSA) framework.

12-Week Scope and Sequence

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| Week 1 | Rational and Irrational Numbers. Distinguish rational from irrational numbers and approximate irrational values. |
| Week 2 | Integer Exponents. Apply the properties of integer exponents to simplify expressions. |
| Week 3 | Scientific Notation. Express and operate with numbers written in scientific notation. |
| Week 4 | Proportional Relationships and Slope. Graph proportional relationships and interpret slope as a unit rate. |
| Week 5 | Linear Equations. Solve multi-step linear equations, including those with variables on both sides. |
| Week 6 | Systems of Equations. Solve systems of two linear equations algebraically and graphically. |
| Week 7 | Introduction to Functions. Understand functions as rules that assign one output to each input. |
| Week 8 | Linear Functions. Interpret and compare linear functions using rate of change and initial value. |
| Week 9 | Transformations. Describe the effects of translations, reflections, rotations, and dilations. |
| Week 10 | Congruence and Similarity. Use transformations to establish congruence and similarity of figures. |
| Week 11 | Pythagorean Theorem. Apply the Pythagorean Theorem to find distances and unknown side lengths. |
| Week 12 | Volume and Review. Find the volume of cylinders, cones, and spheres and apply skills to a performance task. |

Standards alignment. This plan aligns to Connecticut Core Standards for Grade 8 Mathematics across the number system, expressions and equations including linear equations and systems, functions, and geometry including transformations and the Pythagorean Theorem. Lessons target the prerequisite skills students need to reach grade-level proficiency while reinforcing current classroom instruction. Final scope and sequence are aligned to the district's adopted curriculum and pacing guides during the design phase.



HIGH-IMPACT TUTORING PLAN

High-Impact Tutoring Plan

Connecticut

Grade 9 Mathematics

This plan is built on Connecticut state standards and reflects the design of a GROW High-Impact Tutoring mathematics program. The scope and sequence is finalized to the district's adopted curriculum, pacing guides, and instructional priorities during program design.

A 12-week program that supports ninth grade students in the core algebra skills that determine success in high school mathematics, from linear reasoning to an introduction to quadratics. Each week builds on prior skills, so students gain fluency and confidence as concepts grow in complexity.

Dosage and duration. The program provides three 30-minute sessions per week, 90 minutes of tutoring weekly, across a 12-week cycle, in small groups of up to three students. Each student works with the same consistent W-2 tutor throughout. This dosage and duration reflects the science of high-impact tutoring, aligned to the National Student Support Accelerator (NSSA) framework.

12-Week Scope and Sequence

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| Week 1 | Number and Expression Foundations. Simplify expressions and operate with real numbers to prepare for algebraic reasoning. |
| Week 2 | Solving Linear Equations. Solve multistep linear equations and justify each step. |
| Week 3 | Linear Inequalities. Solve and graph linear inequalities and interpret solutions in context. |
| Week 4 | Introduction to Functions. Interpret functions as relationships between inputs and outputs using multiple representations. |
| Week 5 | Linear Functions and Slope. Analyze rate of change and interpret slope and intercepts in context. |
| Week 6 | Graphing and Writing Linear Models. Write and graph linear equations to model real situations. |
| Week 7 | Systems of Equations. Solve systems of linear equations by graphing, substitution, and elimination. |
| Week 8 | Exponent Rules. Apply properties of exponents to simplify expressions. |
| Week 9 | Polynomial Operations. Add, subtract, and multiply polynomials. |
| Week 10 | Factoring. Factor quadratic expressions using structure and common factors. |
| Week 11 | Quadratic Functions. Interpret and graph quadratic functions and their key features. |
| Week 12 | Solving Quadratics and Review. Solve quadratic equations and apply skills to a performance task. |

Standards alignment. This plan aligns to Connecticut Core Standards for high school Algebra, across linear equations and inequalities, functions, systems of equations, and an introduction to polynomials and quadratics. Lessons target the prerequisite skills students need to reach grade-level proficiency while reinforcing current classroom instruction. Final scope and sequence are aligned to the district's adopted curriculum and pacing guides during the design phase.



HIGH-IMPACT TUTORING PLAN

High-Impact Tutoring Plan

Connecticut

Grade 10 Mathematics

This plan is built on Connecticut state standards and reflects the design of a GROW High-Impact Tutoring mathematics program. The scope and sequence is finalized to the district's adopted curriculum, pacing guides, and instructional priorities during program design.

A 12-week program that develops tenth grade students in geometric reasoning and proof, reflecting a typical high school Geometry course. The sequence moves from foundational reasoning through congruence, similarity, circles, and coordinate geometry, so each concept builds on the last.

Dosage and duration. The program provides three 30-minute sessions per week, 90 minutes of tutoring weekly, across a 12-week cycle, in small groups of up to three students. Each student works with the same consistent W-2 tutor throughout. This dosage and duration reflects the science of high-impact tutoring, aligned to the National Student Support Accelerator (NSSA) framework.

12-Week Scope and Sequence

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| Week 1 | Foundations of Geometry. Use precise definitions of points, lines, planes, and angles to reason about figures. |
| Week 2 | Reasoning and Proof. Build logical arguments and write basic geometric proofs. |
| Week 3 | Parallel and Perpendicular Lines. Apply angle relationships formed by parallel lines and transversals. |
| Week 4 | Triangle Congruence. Prove triangles congruent using criteria such as SSS, SAS, and ASA. |
| Week 5 | Similarity. Use similarity criteria and proportional reasoning to solve problems. |
| Week 6 | Right Triangles and Trigonometry. Apply the Pythagorean Theorem and basic trigonometric ratios. |
| Week 7 | Quadrilaterals and Polygons. Classify and prove properties of quadrilaterals and polygons. |
| Week 8 | Circles. Analyze relationships among arcs, chords, angles, and tangents in circles. |
| Week 9 | Coordinate Geometry. Use coordinates to prove geometric relationships and find distances. |
| Week 10 | Transformations. Describe and apply rigid motions and dilations in the coordinate plane. |
| Week 11 | Area and Volume. Find the area of two-dimensional figures and the volume of solids. |
| Week 12 | Integration and Review. Apply geometric reasoning to a performance task aligned to classroom expectations. |

Standards alignment. This plan aligns to Connecticut Core Standards for high school Geometry, across congruence, similarity, right triangle trigonometry, circles, and coordinate geometry, with reasoning and proof throughout. Lessons target the prerequisite skills students need to reach grade-level proficiency while reinforcing current classroom instruction. Final scope and sequence are aligned to the district's adopted curriculum and pacing guides during the design phase.