WATERBURY PUBLIC SCHOOLS

Committee Meeting Agenda/Minutes

Committee:	BOE Curriculum Committee		
Location:	**Date of Meeting:**	**Start Time:**	**Finish Time:**
Superintendent's Office Chase Building/Room 158 236 Grand Street	Thursday October 22, 2026	5:02 p.m.	***7:00 p.m.***

Team Norms:

1. All meetings will start on time
2. All team members will agree to stay on specific agenda topics
3. A specific agenda will be set for all meeting

Commissioners Present:	Staff Present:
Commissioners Heyward Bowen, Jackson, Lopez, Muñoz, and Van Stone.	***Janet Frenis, Michael Merati, Juan Mendoza, and Bob Shagensky.***

AGENDA			MOTION
	Agenda Item	**Time Allotted**	**Motion by/seconded by Vote tally**
1.	Atlas Parent and Community Facing Curriculum – *J. Frenis*		*State law requires on website*
2.	Elementary Math – *Robert Shagensky.* a) Mathematics Grade K b) Mathematics Grade 1 c) Mathematics Grade 2 d) Mathematics Grade 3 e) Mathematics Grade 4 f) Mathematics Grade 5		(see below)
3.	Middle School Math – *Beth Corbin/ Robert Shagensky.* a) Mathematics Grade 6 b) Mathematics Grade 6 (Wallace) c) Mathematics Grade 7 d) Mathematics Grade 7 Accelerated e) Mathematics Grade 8		***Motion to approve Agenda Items #2a – 2f, Elementary Math Curriculums AND Agenda Items #3a – 3e, Middle School Math Curriculums and submit to the full Board of Education for their approval at their next regular meeting.*** ***Lopez/Heyward Bowen UNANIMOUS***

4.	High School Math – *Beth Corbin/ Robert Shagensky* a) Foundations of Algebra b) Algebra 1 c) Geometry d) Geometry ACE/ATOMS/SOAR/Accelerated/Honors e) Algebra 2 f) Algebra 2 ACE/ATOMS/SOAR/Accelerated/Honors g) PreCalculus h) Calculus i) Math SAT Prep j) Statistics 1 k) Statistics 2		Received feedback from teachers – resources. Added teachers to curriculum team. Foundations may take longer to best establish lessons to students. Lessons are meant to have students understand what they are learning rather than just solving. **Motion to approve Agenda Items #4a – 4k, High School Math Curriculums, and submit to the full Board of Education for their approval at their next regular meeting.** **Lopez/Heyward Bowen UNANIMOUS**
5.	Cyber Security 1 and 2 – *Michael Merati.*		**Motion to approve Agenda Item #5 – Cyber Security 1 and 2 Curriculums, and submit to the full Board of Education for their approval at their next regular meeting.** **Lopez/Heyward-Bowen UNANIMOUS**
6.	Cyber Security 3 – *Michael Merati.*		***Motion to approve Agenda Item #6 – Cyber Security 3 Curriculum, and submit to the full Board of Education for their approval at their next regular meeting.*** **Lopez/Heyward-Bowen UNANIMOUS**
7.	Foundations of Engineering, Invention, and Innovation – *Michael Merati.*		**Motion to approve Agenda Item #7 - Foundations of Engineering, Invention, and Innovation Curriculum, and submit to the full Board of Education for their approval at their next regular meeting.** **Lopez/Heyward-Bowen UNANIMOUS**

8.	Design, Engineering, and Entrepreneurship – *Michael Merati.*		**Motion to approve Agenda Item #8 – Design, Engineering, and Entrepreneurship Curriculum, and submit to the full Board of Education for their approval at their next regular meeting.** **Lopez/Heyward-Bowen** **UNANIMOUS**
9.	Adjournment	7:00 p.m.	**Lopez/Heyward Bowen** **UNANIMOUS**
Additional notes/minutes: ***Adding Multilanguage to curriculum pages.***			
Minutes prepared by: **Commissioners Jackson and Muñoz**			

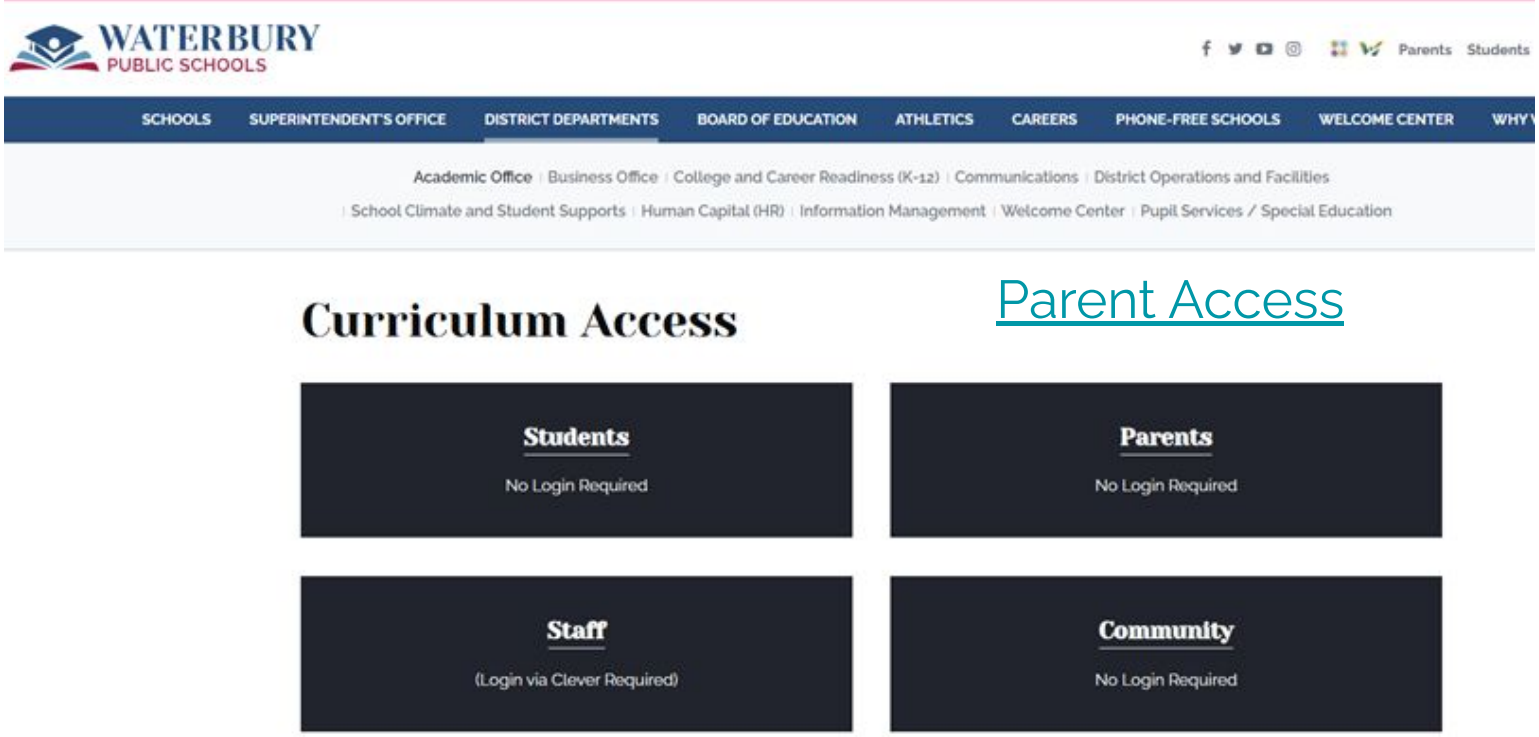
Waterbury Board of Education
Curriculum Committee
SIGN-IN SHEET
October 22, 2026

PRINT NAME	TITLE
Bob Shagensky	Elementary Math Supervisor
Janet Frenis	CAO
Tom VanStone	BOE
Kay Muñoz	BOE
Jacqueline Jackson	Commissioner BOE
Michael Merati	SUPERVISOR CTE
Margarita H. Bowen	BOE
Yarixa Lopez	BOE
Juan Mendoza	BOE

WATERBURY
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Board of Education
Curriculum Committee
October 22, 2026

Atlas-Parent Access on WPS Website



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Elementary Mathematics

Core Program

i-Ready Classroom Mathematics





Core Tier 1 Curriculum

Grade-level instruction with built-in differentiation

Comprehensive Resources

Print and digital materials for online/offline learning

Student Practice

Interactive lessons, targeted tutorials, and fluency practice

Assessment Suite

Formative lesson & unit assessments via the i-Ready online platform

Let's take a walk through a

4th Grade Lesson!

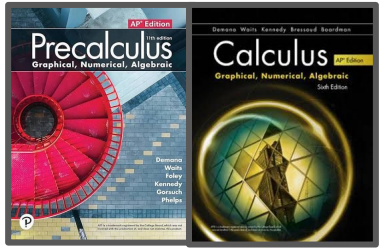
WATERBURY PUBLIC SCHOOLS

Secondary Mathematics

Middle School: i-Ready

High School:





Message from Beth:
I wish I could be here tonight to highlight and discuss the Secondary Math Curriculum. I am so proud of the collaborative work, and I welcome any additional questions or conversations.

Rollout:

- Implementation of core program Year 1
- Feedback – Data
- Adjustments
- Additional resources, as needed
- Continuous feedback

Let's take a walk through a 7th grade and Algebra II lesson…

WATERBURY PUBLIC SCHOOLS

Career and Technical Education

Cybersecurity 1 / Cybersecurity 2

STEM

Course Code: 759 / 762

Credits: 0.5

Grades: 10-12

Weight: General

Schools: C, K, W, WCA

In this Fundamentals of Cybersecurity course, students will gain a comprehensive understanding of the digital world they navigate every day. Students will be exposed to the inner workings of computer hardware and software, explore the intricacies of how networks connect, and dive into the world of encryption and cryptography. They will also learn the importance of safeguarding our increasingly digital world from unauthorized access, ensuring the privacy and integrity of data. By understanding these fundamental building blocks, students will be able to identify and defend against potential cybersecurity threats. This comprehensive approach will ensure that students are well-prepared to navigate the ever-evolving cybersecurity landscape.

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New Courses

Cybersecurity 3

STEM

Course Code: 783

Credits: 1.0

Grades: 11-12

Weight: General

Schools: C, K, W, WCA

Prerequisites: Cybersecurity 2

In this course, students build on their foundational cybersecurity knowledge to explore complex concepts in data protection, secure communications, and threat defense. Through interactive lessons, hands-on coding, and investigative projects, students uncover how data is protected, communications verified, and cyber threats mitigated. They'll take on the roles of cryptographers, forensic analysts, and network architects as they tackle real-world security challenges and engineer creative solutions. With projects like building steganographic tools and crafting security policies, students gain both technical expertise and critical thinking skills for the digital age.

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Cybersecurity Information

Scope and Sequence

Lesson Plans

Sample Lesson Plan

Standards Mapping

Syllabus Cybersecurity 3

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Foundations of Engineering, Invention, and Innovation

STEM

Course Code: 781

Credits: 0.5

Grade: All

Weight: General

Schools: C, K, W

This introductory course focuses on the engineering design process and its role in invention and innovation. The course provides students with a comprehensive survey of the technological and economic landscapes as they pertain to the invention and innovation of solutions (products) that enter the marketplace for consumers or aid and advance the production of marketable products. Students explore the engineering design process, the nature of invention and innovation, technology development, and deployment. Specifically, students will be analyzing the development of new solutions and their effects on society, culture, the economy, and the environment. That analysis will occur as they identify the needs of a group of consumers or businesses and then develop and present those solutions as tested prototypes. Within this class, students will be exposed to career paths across the product pipeline, from design, engineering, and manufacturing to marketing and business operations.

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Activities and Projects

Build a Better Mousetrap - The economic desire for the product, coupled with using the engineering design process to create a new product, complete with a prototype and marketing plan/materials
Paper and Small Wood/Recycled Materials Towers- The role of structural forces in designing the physical plant, machinery, and structures that everything from homes and working spaces to the energy grid, and space travel rely on.
Paper/Foam Airplanes- Exploration of flight and aerodynamic principles from gliding to powered flight.
Identify and determine a Need for you and Your Surroundings (home, family, school, community, team, or club), design a solution, prototype it, deploy it, and report on the outcomes and feedback. Your solutions must incorporate at least two of the following build/making/manufacturing processes: 3D printing, digital printing and design, heat press, painting/finishing, laser cutting/engraving, wood or plastic or paper/cardboard or foam or metal, digital programming or electronic components, or other processes or materials as approved by the teacher.
School Need-Based Project- Working with a teacher, group, team, or administrator, identify a need "product" design it and the marketing materials, along with the budget for the "project/product", win approval of the group in need and the course teacher, then create the "project/product" for use, presenting both the pitch for the product/project approval and the final product release/outcome at semester end.

Design, Engineering, and Entrepreneurship

STEM

Course Code: 782
Credits: 0.5
Grade: All
Weight: General
Schools: C, K, W

Serving as a "horizon-broadening experience," this intermediate-level course uses a project-based laboratory to practice professional skills required in 21st-century STEM/STEAM (Science, Technology, Engineering, Art, and Math) industries. Students transition from theoretical knowledge to the practical application of building and managing a venture. Students will continue to explore the engineering design process, the nature of invention and innovation, technology development, and deployment. Specifically, students will be paired with a community group or company with a specific need for a product/solution. Students, in conjunction with the teacher and a mentor/representative from the “customer,” will analyze the need, develop solutions, test them, and present the prototypes. With the teacher and “customer” select a solution and then implement it. The whole process and the solution will be presented in class and to the community. Within this class, students will be exposed to career paths across the product pipeline, from design, engineering, and manufacturing to marketing and business operations.

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Activities and Projects

Design and Produce- Create an idea for a product that requires an engineering and technology-based solution for a marketable product. Develop the pitch and prototype, including marketing materials and a sample product, during the early prototype phase. Pitch to the audience, including members of the Chamber of Commerce and Manufacturing Association.

School and/or Business Community Need-Based Project- Working with a teacher, group, team, administrator, another school or an area business partner identify a need "product" design it and the marketing materials, along with the budget for the "project/product", win approval of the group in need and the course teacher, then create the "project/product" for use, presenting both the pitch for the product/project approval and the final product release/outcome at semester end.

Create and present at the beginning, middle, and end of the semester your engineering design process notebook/portfolio, combining your handwritten/hand-drawn work with digital and physical artifacts of items designed, prototyped, revisions of designs, and final products.

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Academic Office
One Page Curriculum Committee Summary

Academic Department: Elementary Mathematics **Name of Curriculum/Course: Mathematics Grade K**

Summary of Proposed Curriculum Updates:

In Kindergarten, students develop a foundational understanding of numbers by learning to count, write, and compare quantities up to 20, while building rote counting skills up to 100. Through hands-on models, drawings, and story problems, children explore how numbers break apart and come together, establishing early fluency with addition and subtraction within 10. A central focus is building an initial concept of place value by representing "teen" numbers as a group of ten ones plus additional ones. Alongside their work with numbers, students explore real-world geometry and measurement by describing, sorting, and combining flat and solid shapes while comparing physical attributes like length and weight.

Waterbury Public Schools

Atlas

Mathematics Kindergarten

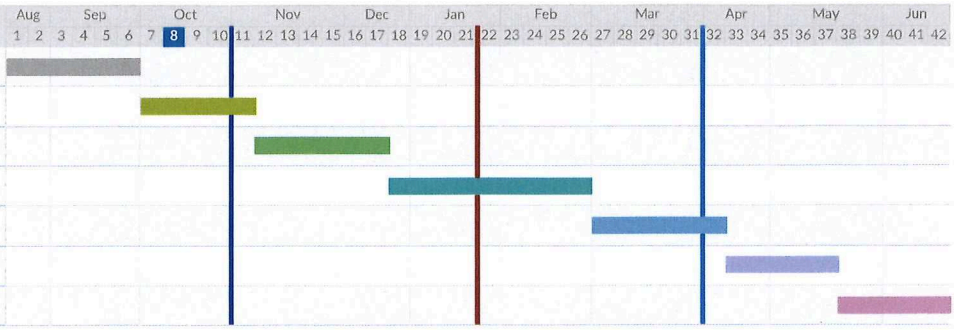
District Elementary School / Kindergarten / Mathematics

Course Description

In Kindergarten, students develop a foundational understanding of numbers by learning to count, write, and compare quantities up to 20, while building rote counting skills up to 100. Through hands-on models, drawings, and story problems, children explore how numbers break apart and come together, establishing early fluency with addition and subtraction within 10. A central focus is building an initial concept of place value by representing "teen" numbers as a group of ten ones plus additional ones. Alongside their work with numbers, students explore real-world geometry and measurement by describing, sorting, and combining flat and solid shapes while comparing physical attributes like length and weight.

Unit Calendar by Year

Unit	Lessons
Unit 1: Position, Length, Heigh...	5
Unit 2: Numbers to 5, Shapes,...	4
Unit 3: Addition and Subtracti...	5
Unit 4: Numbers to 10 and...	6
Unit 5: Numbers to 100	5
Unit 6: Addition and Subtracti...	4
Unit 7: Teen Numbers and...	4



WATERBURY
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Academic Office
One Page Curriculum Committee Summary

Academic Department: Elementary Mathematics **Name of Curriculum/Course: Mathematics Grade 1**

Summary of Proposed Curriculum Updates:

In 1st Grade, students deepen their addition and subtraction skills within 20 by developing flexible problem-solving strategies, exploring how addition and subtraction relate, and understanding the meaning of the equal sign. Through hands-on models and collections, children build a foundational grasp of place value as they organize and compose numbers up to 120 into groups of tens and ones. They apply this place-value reasoning to add and subtract two-digit numbers while learning to organize data using picture graphs and tally charts. Alongside their numerical work, students explore practical measurement and geometry by telling time to the hour and half-hour, measuring lengths with nonstandard units, and partitioning shapes into halves and fourths.

Waterbury Public Schools

Atlas

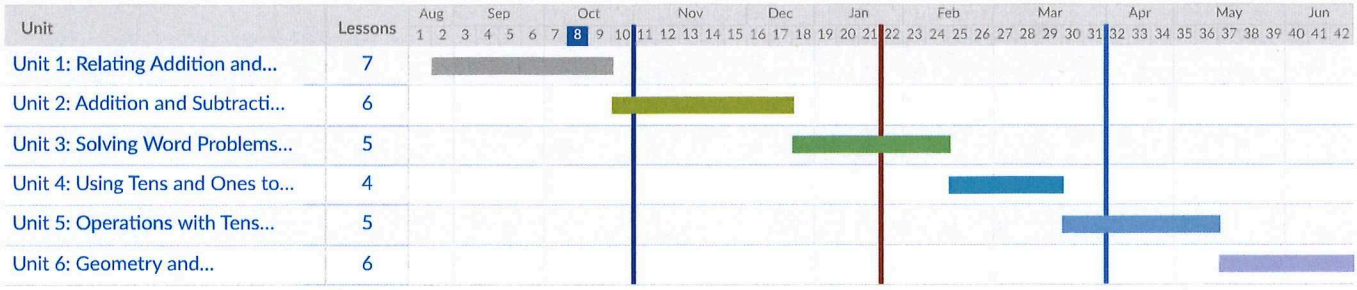
Mathematics Grade 1

District Elementary School / Grade 1 / Mathematics

Course Description

In 1st Grade, students deepen their addition and subtraction skills within 20 by developing flexible problem-solving strategies, exploring how addition and subtraction relate, and understanding the meaning of the equal sign. Through hands-on models and collections, children build a foundational grasp of place value as they organize and compose numbers up to 120 into groups of tens and ones. They apply this place-value reasoning to add and subtract two-digit numbers while learning to organize data using picture graphs and tally charts. Alongside their numerical work, students explore practical measurement and geometry by telling time to the hour and half-hour, measuring lengths with nonstandard units, and partitioning shapes into halves and fourths.

Unit Calendar by Year



WATERBURY
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Academic Office
One Page Curriculum Committee Summary

Academic Department: Elementary Mathematics **Name of Curriculum/Course: Mathematics Grade 2**

Summary of Proposed Curriculum Updates:

In 2nd Grade, students advance their addition and subtraction fluency up to three-digit numbers by using place value strategies, breaking apart numbers, and solving one- and two-step story problems. They expand their understanding of the base-ten system to hundreds, tens, and ones, while applying skip-counting skills to tell time to the nearest five minutes. Students measure, estimate, and compare lengths using standard units like inches and centimeters, connecting measurement concepts directly to number lines and line plots. Alongside geometry concepts like classifying polygons, children partition shapes into halves, thirds, and fourths and explore rectangular arrays and even/odd numbers to build a foundation for multiplication.

Waterbury Public Schools

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Mathematics Grade 2

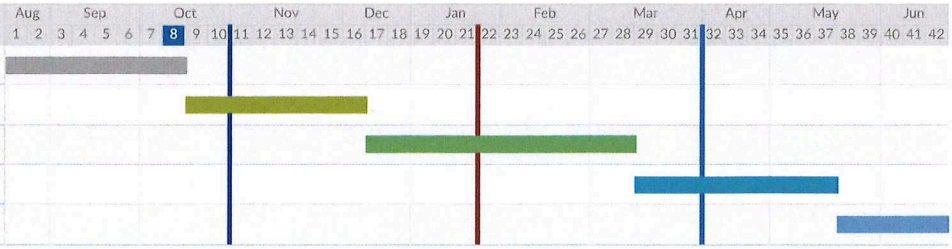
District Elementary School / Grade 2 / Mathematics

Course Description

In 2nd Grade, students advance their addition and subtraction fluency up to three-digit numbers by using place value strategies, breaking apart numbers, and solving one- and two-step story problems. They expand their understanding of the base-ten system to hundreds, tens, and ones, while applying skip-counting skills to tell time to the nearest five minutes. Students measure, estimate, and compare lengths using standard units like inches and centimeters, connecting measurement concepts directly to number lines and line plots. Alongside geometry concepts like classifying polygons, children partition shapes into halves, thirds, and fourths and explore rectangular arrays and even/odd numbers to build a foundation for multiplication.

Unit Calendar by Year

Unit	Lessons
Unit 1: Numbers Within 20	6
Unit 2: Numbers Within 100	7
Unit 3: Numbers Within 1,000	9
Unit 4: Length	9
Unit 5: Shapes and Arrays	6



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Academic Office
One Page Curriculum Committee Summary

Academic Department: Elementary Mathematics **Name of Curriculum/Course: Mathematics Grade 3**

Summary of Proposed Curriculum Updates:

In 3rd Grade, students transition into conceptual multiplication and division by connecting equal groups and arrays to facts within 100, while developing strategies to add, subtract, and round numbers up to 1,000. They explore fractions as equal parts of a whole and specific locations on a number line, building a foundational understanding of fraction equivalence and comparisons. Through practical applications, children measure area and perimeter, read time to the nearest minute, calculate elapsed time, and solve real-world problems involving mass and liquid volume. Additionally, students analyze geometry and data concepts by classifying quadrilaterals based on their attributes, representing data on scaled graphs and line plots, and linking fractional parts directly to geometric area.

Waterbury Public Schools

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Mathematics Grade 3

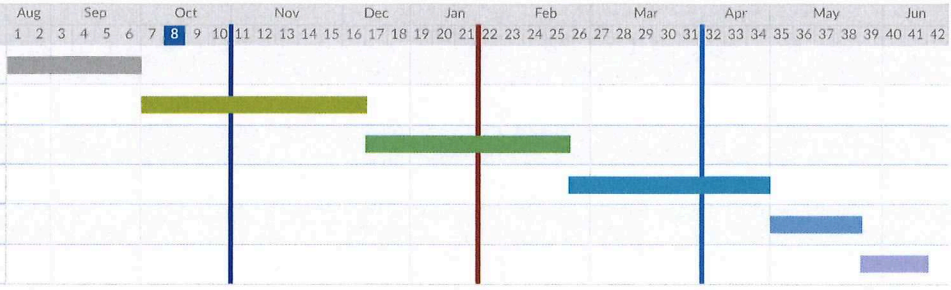
District Elementary School / Grade 3 / Mathematics

Course Description

In 3rd Grade, students transition into conceptual multiplication and division by connecting equal groups and arrays to facts within 100, while developing strategies to add, subtract, and round numbers up to 1,000. They explore fractions as equal parts of a whole and specific locations on a number line, building a foundational understanding of fraction equivalence and comparisons. Through practical applications, children measure area and perimeter, read time to the nearest minute, calculate elapsed time, and solve real-world problems involving mass and liquid volume. Additionally, students analyze geometry and data concepts by classifying quadrilaterals based on their attributes, representing data on scaled graphs and line plots, and linking fractional parts directly to geometric area.

Unit Calendar by Year

Unit	Lessons
Unit 1: Three-Digit Numbers	4
Unit 2: Multiplication and...	11
Unit 3: Multiplication: Area an...	8
Unit 4: Fractions	8
Unit 5: Measurement	4
Unit 6: Shapes	4



WATERBURY
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Academic Office
One Page Curriculum Committee Summary

Academic Department: Elementary Mathematics **Name of Curriculum/Course: Mathematics Grade 4**

Summary of Proposed Curriculum Updates:

In 4th Grade, students extend their understanding of multi-digit whole numbers up to 1,000,000 by applying place-value reasoning to round numbers and fluently perform standard addition and subtraction algorithms. They deepen their operations skills by multiplying multi-digit numbers and dividing with one-digit divisors, using area models, partial products, and multiplicative comparisons to solve multi-step problems. A major focus of the year is fractions and decimals, where children generate equivalent fractions, perform operations with mixed numbers, multiply fractions by whole numbers, and connect tenths and hundredths to decimals. Additionally, students explore geometry and measurement by classifying two-dimensional shapes, identifying lines of symmetry, measuring angles with protractors, and converting measurement units.

Waterbury Public Schools

Atlas

Mathematics Grade 4

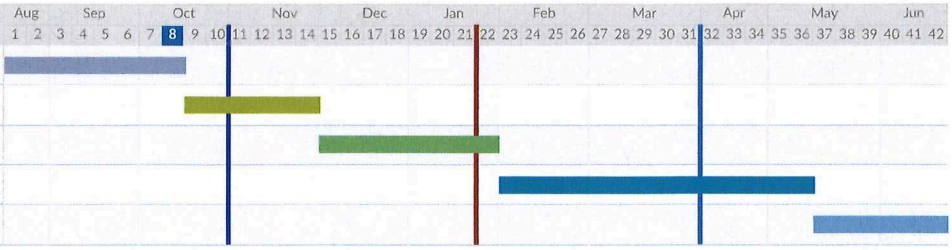
District Elementary School / Grade 4 / Mathematics

Course Description

In 4th Grade, students extend their understanding of multi-digit whole numbers up to 1,000,000 by applying place-value reasoning to round numbers and fluently perform standard addition and subtraction algorithms. They deepen their operations skills by multiplying multi-digit numbers and dividing with one-digit divisors, using area models, partial products, and multiplicative comparisons to solve multi-step problems. A major focus of the year is fractions and decimals, where children generate equivalent fractions, perform operations with mixed numbers, multiply fractions by whole numbers, and connect tenths and hundredths to decimals. Additionally, students explore geometry and measurement by classifying two-dimensional shapes, identifying lines of symmetry, measuring angles with protractors, and converting measurement units.

Unit Calendar by Year

Unit	Lessons
Unit 1: Whole Numbers	6
Unit 2: Operations	6
Unit 3: Multi-Digit Operations...	7
Unit 4: Fractions, Decimals, an...	14
Unit 5: Geometry and...	6



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Academic Office
One Page Curriculum Committee Summary

Academic Department: Elementary Mathematics **Name of Curriculum/Course: Mathematics Grade 5**

Summary of Proposed Curriculum Updates:

In 5th Grade, students master multi-digit whole number multiplication using the standard algorithm and extend their place-value understanding to read, write, compare, and perform all four operations with decimals through the thousandths. They deepen their work with fractions by adding and subtracting with unlike denominators, multiplying fractions and mixed numbers, and dividing whole numbers and unit fractions. Through practical measurement and spatial reasoning, children explore three-dimensional volume using formulas, convert units across metric and customary systems, and classify two-dimensional shapes using hierarchy charts. Additionally, students build algebraic thinking by evaluating numerical expressions with parentheses and graphing ordered pairs on the coordinate plane to analyze real-world patterns and relationships.

Waterbury Public Schools

Atlas

Mathematics Grade 5

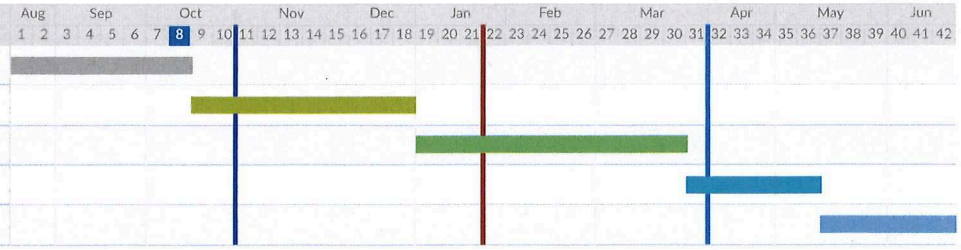
District Elementary School / Grade 5 / Mathematics

Course Description

In 5th Grade, students master multi-digit whole number multiplication using the standard algorithm and extend their place-value understanding to read, write, compare, and perform all four operations with decimals through the thousandths. They deepen their work with fractions by adding and subtracting with unlike denominators, multiplying fractions and mixed numbers, and dividing whole numbers and unit fractions. Through practical measurement and spatial reasoning, children explore three-dimensional volume using formulas, convert units across metric and customary systems, and classify two-dimensional shapes using hierarchy charts. Additionally, students build algebraic thinking by evaluating numerical expressions with parentheses and graphing ordered pairs on the coordinate plane to analyze real-world patterns and relationships.

Unit Calendar by Year

Unit	Lessons
Unit 1: Whole Number...	6
Unit 2: Decimals and Fractions	10
Unit 3: More Decimals and...	11
Unit 4: Measurement, Data, an...	6
Unit 5: Algebraic Thinking and...	5



WATERBURY
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Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Mathematics Grade 6

Summary of Proposed Curriculum Updates:

The Grade 6 mathematics curriculum builds students' conceptual understanding and procedural fluency across number systems, ratios, algebra, geometry, and statistics. Students develop skills in fraction and decimal operations, explore ratios, rates, and percents, and use expressions and equations to represent and solve problems. They extend their understanding of rational numbers to include negative values and coordinate graphing, calculate area, surface area, and volume, and analyze data distributions using graphical representations and statistical measures. Throughout the course, students apply mathematical reasoning to solve problems and make connections to real-world situations.

Waterbury Public Schools

Atlas

Mathematics Grade 6

District Middle School / Grade 6 / Mathematics

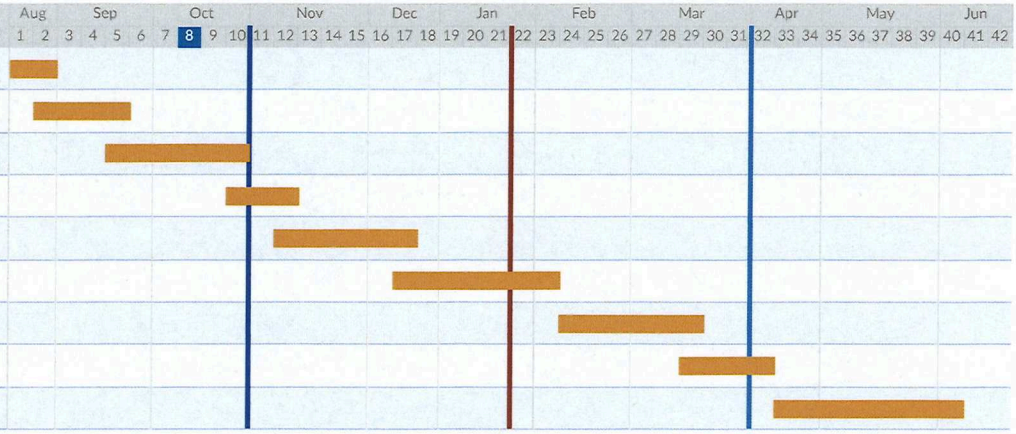
Corbin, Elizabeth | Last Updated: Tuesday, Oct 6, 2026 by Corbin, Elizabeth

Course Description

Students in the 6th grade focus on active engagement with numbers by focusing on conceptual understanding, computational and procedural skills, and problem solving. The 6th grade standards require students to study the following areas: rational numbers, algebraic thinking, proportional reasoning, statistics, data analysis, probability, and plane and solid shapes.

Unit Calendar by Year

Unit	Lessons
Unit 0 - Introduction to 6th...	1
Unit 1 - Expressions and...	4
Unit 2 - Decimals and Fraction...	6
Unit 3 - Ratio Reasoning: Ratio...	4
Unit 4 - Ratio Reasoning: Unit...	6
Unit 5 - Algebraic Thinking:...	7
Unit 6 - Positive and Negative...	7
Unit 7 - Geometry	6
Unit 8 - Statistical Thinking:...	8



9 Units found and 216 Lessons found | 167 Lesson(s) with no Unit

WATERBURY
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Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Mathematics Grade 6 Accelerated (Wallace Academy)

Summary of Proposed Curriculum Updates:

The Grade 6 Accelerated Mathematics curriculum builds students' conceptual understanding and procedural fluency across number systems, ratios, algebra, geometry, and statistics, with an emphasis on deeper proportional reasoning and more advanced applications. Students develop fluency with fraction and decimal operations, explore ratios, rates, and percents, and use expressions, equations, and graphs to represent mathematical relationships. They extend their understanding of rational numbers to include negative values and coordinate graphing, calculate area, surface area, and volume, and analyze data distributions using graphical representations and statistical measures. Students further apply proportional reasoning to complex real-world problems involving fractional unit rates, simple interest, percent change, and percent error.

Waterbury Public Schools

Atlas

Mathematics Grade 6 Accelerated (Wallace Academy)

District Middle School / Grade 6 / Mathematics

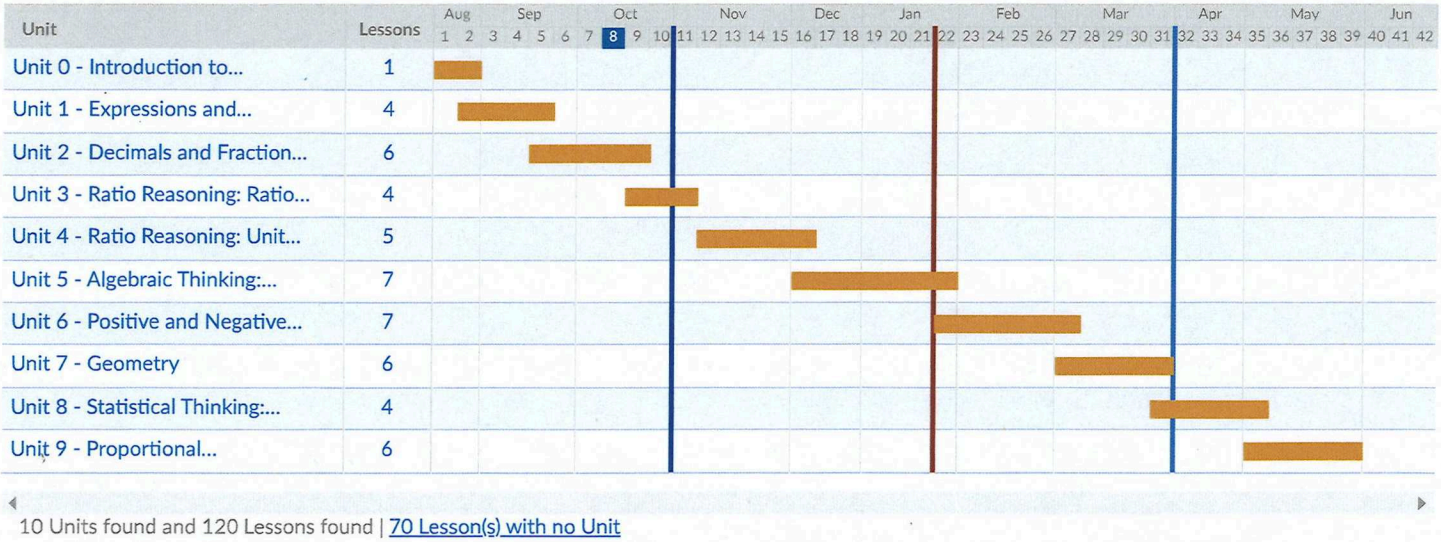
2 Curriculum Developers | Last Updated: Friday, Oct 9, 2026 by Corbin, Elizabeth

Course Description

Designed for ambitious learners, the Grade 6 Mathematics Accelerated course paves the way for future success in Algebra I by the 8th grade. This dynamic curriculum not only comprehensively covers all 6th-grade major standards but also delves into select topics from 7th-grade major standards. By enrolling in this accelerated program, students are not only challenged but also prepared for the rigors of advanced mathematical concepts. It is our expectation that students who embark on this journey will seamlessly transition into Grade 7 Mathematics Accelerated in the subsequent academic year, further solidifying their foundation for higher-level mathematics.

This course is designed only for the Academic Academy at Wallace.

Unit Calendar by Year



10 Units found and 120 Lessons found | 70 Lesson(s) with no Unit

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Mathematics Grade 7

Summary of Proposed Curriculum Updates:

The Grade 7 mathematics curriculum builds students' understanding of rational numbers, algebra, proportional reasoning, statistics, probability, and geometry. Students perform operations with positive and negative numbers, solve multi-step equations and inequalities, and analyze proportional relationships using equations, graphs, and real-world applications involving percents, interest, and percent change. They use statistical sampling to draw conclusions about populations, compare data distributions, and investigate probabilities of single and compound events. Students also explore scale factors, circles, angle relationships, and two- and three-dimensional figures, applying geometric concepts to solve problems involving circumference, area, surface area, and volume.

Waterbury Public Schools

Atlas

Mathematics Grade 7

District Middle School / Grade 7 / Mathematics

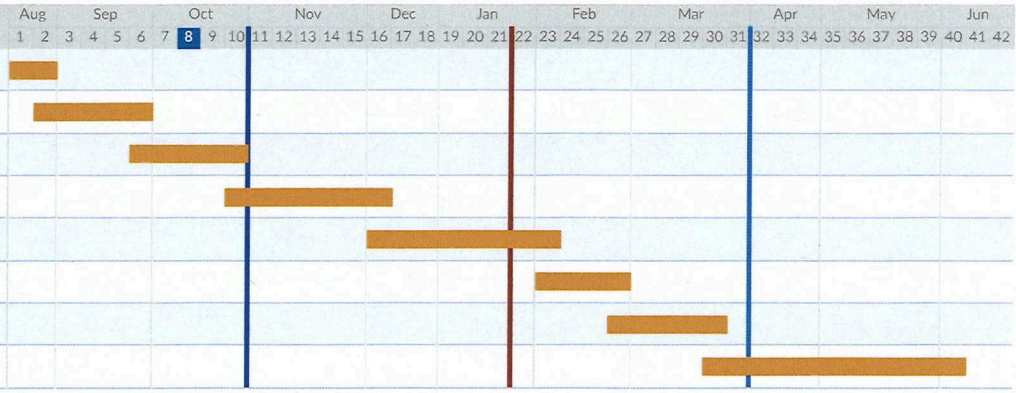
Corbin, Elizabeth | Last Updated: Friday, Oct 9, 2026 by Corbin, Elizabeth

Course Description

This 7th-grade math course focuses on teaching students a range of mathematical concepts and skills, including proportional relationships, the number system, expressions and equations, geometry, statistics and probability, and mathematical practices. By the end of the course, students should be able to solve problems using proportional reasoning, perform operations with rational numbers, solve linear equations, understand and analyze data presented in graphs and tables, work with angle relationships, and use appropriate tools strategically. In addition to building these skills, students will also develop important critical thinking and communication skills.

Unit Calendar by Year

Unit	Lessons
Unit 0 - Introduction to 7th...	1
Unit 1 - Numbers and...	5
Unit 2 - Numbers and...	6
Unit 3 - Algebraic Thinking:...	7
Unit 4 - Proportional...	10
Unit 5 - Statistical Samples	4
Unit 6 - Probability: Theoretica...	5
Unit 7 - Geometry	11



8 Units found and 206 Lessons found | 157 Lesson(s) with no Unit

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Mathematics Grade 7 Accelerated

Summary of Proposed Curriculum Updates:

The Grade 7 Accelerated Mathematics curriculum deepens students' understanding of rational numbers, algebra, proportional reasoning, geometry, and number systems while introducing concepts that prepare students for Algebra 1. Students perform operations with rational numbers, solve multi-step equations and inequalities, and apply proportional reasoning to percents, slope, and linear equations. They explore rigid transformations, dilations, congruence, similarity, and geometric relationships involving angles and triangles. Students also investigate powers and exponents, scientific notation, irrational numbers, the Pythagorean Theorem, and volume formulas for three-dimensional figures, applying these concepts to solve mathematical and real-world problems.

Waterbury Public Schools

Atlas

Mathematics Grade 7 Accelerated

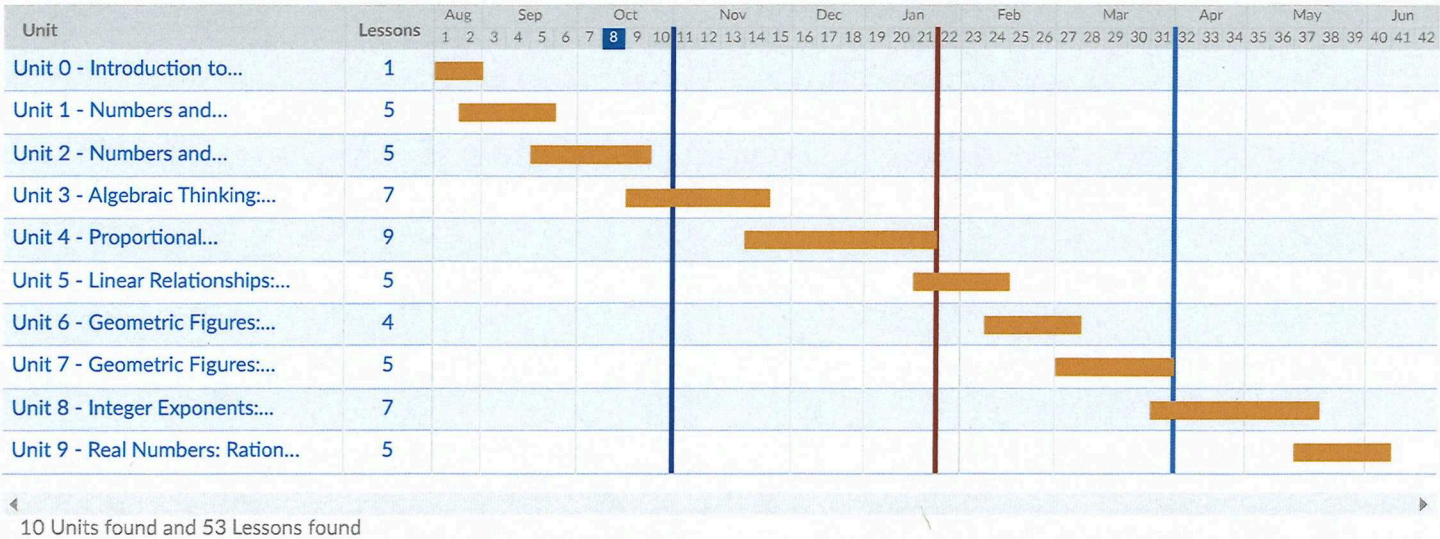
District Middle School / Grade 7 / Mathematics

2 Curriculum Developers | Last Updated: Friday, Oct 9, 2026 by Corbin, Elizabeth

Course Description

Designed for ambitious learners, the Grade 7 Mathematics Accelerated course paves the way for future success in Algebra I by the 8th grade. This dynamic curriculum not only comprehensively covers the remaining 7th-grade major standards but also covers the 8th-grade major standards. By enrolling in this accelerated program, students are not only challenged but also prepared for the rigors of advanced mathematical concepts. It is our expectation that students who embark on this journey will seamlessly transition into Grade 8 Algebra I in the subsequent academic year, further solidifying their foundation for higher-level mathematics.

Unit Calendar by Year



10 Units found and 53 Lessons found

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Mathematics Grade 8

Summary of Proposed Curriculum Updates:

The Grade 8 mathematics curriculum develops students' understanding of geometry, linear relationships, functions, exponents, irrational numbers, and data analysis. Students explore transformations, congruence, similarity, and angle relationships while applying slope, linear equations, systems of equations, and functions to represent and analyze relationships. They use exponent properties and scientific notation to work with very large and small numbers, apply the Pythagorean Theorem and volume formulas to solve problems, and analyze bivariate data using scatter plots, lines of fit, and two-way tables to identify patterns and associations.

Waterbury Public Schools

Atlas

Mathematics Grade 8

District Middle School / Grade 8 / Mathematics

Corbin, Elizabeth | Last Updated: Tuesday, Jun 30, 2026 by Corbin, Elizabeth

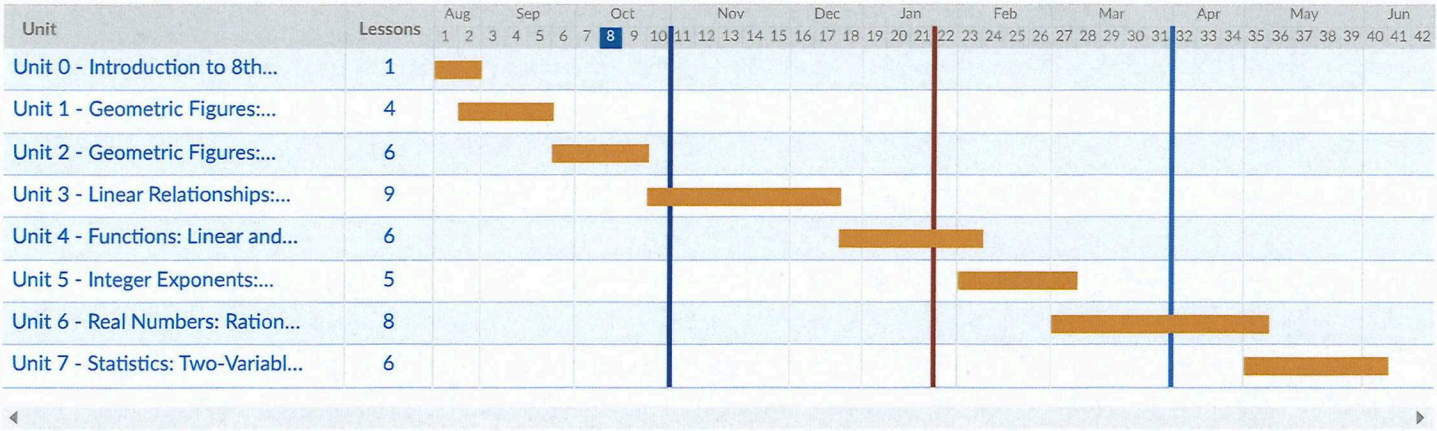
Course Description

In 8th grade math, students will build on their previous knowledge of arithmetic, algebra, geometry, and statistics, and prepare for high school math.

The course will cover four main domains: Number System, Expressions and Equations, Functions, and Geometry and Statistics. In Number System, students will deepen their understanding of rational and irrational numbers, and use them to solve problems involving operations, fractions, and decimals. In Expressions and Equations, students will simplify and evaluate algebraic expressions, solve linear equations and inequalities, and represent and analyze functions. In Functions, students will explore the concept of a function, and use functions to model real-world situations, solve problems, and make predictions. In Geometry and Statistics, students will study geometric concepts such as angles, congruence, similarity, and transformations, and use them to solve problems involving two- and three-dimensional figures. They will also learn about statistical concepts such as variability, data distributions, and measures of central tendency, and use them to interpret and analyze data from different sources.

The course will emphasize conceptual understanding, procedural fluency, and problem-solving skills. Students will explore mathematical concepts and skills through real-world problems and applications, and use mathematical tools and technology to enhance their learning.

Unit Calendar by Year



8 Units found and 45 Lessons found

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Foundations of Algebra

Title	Course Code	Credits	Grade/s
Foundations of Algebra	**399**	**1.0**	**9**

Description:
Foundations of Algebra is designed for 9th grade students who need additional preparation before Algebra 1. The course strengthens number sense, equation solving, proportional reasoning, introductory function concepts, inequality solving, and exponent applications while reinforcing problem-solving and mathematical reasoning skills. Students build fluency with essential algebraic content and make clear connections to Algebra 1, ensuring readiness for success in future high school math courses.

Waterbury Public Schools

Atlas

Foundations of Algebra

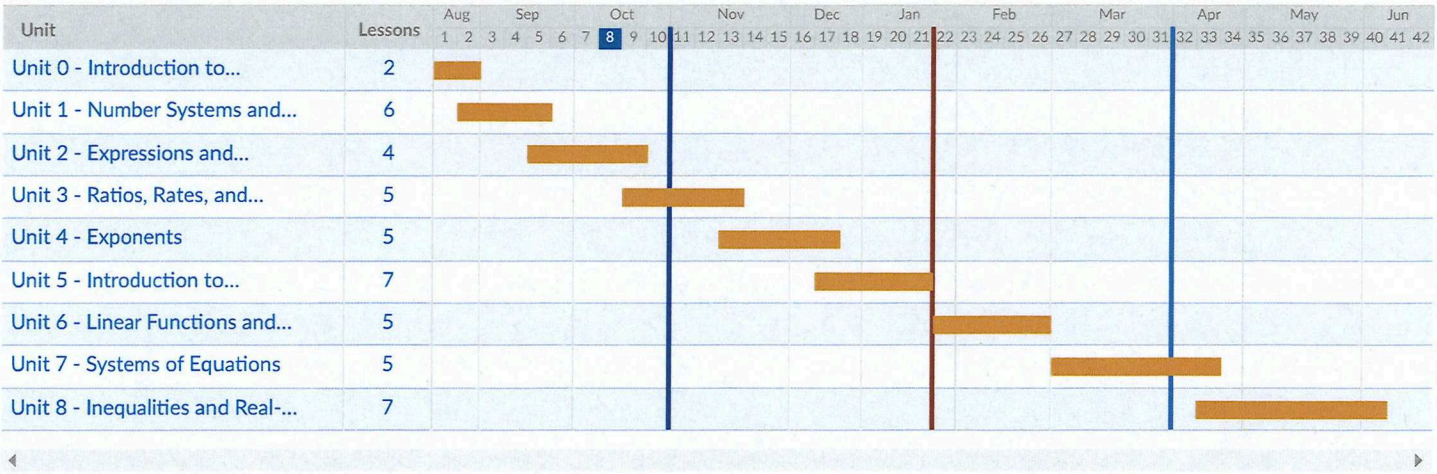
District High School / Grade 9 / Mathematics

Corbin, Elizabeth | Last Updated: Tuesday, Jun 30, 2026 by Corbin, Elizabeth

Course Description

Temporary description:
Foundations of Algebra is designed for 9th grade students who need additional preparation before Algebra 1. The course strengthens number sense, equation solving, proportional reasoning, introductory function concepts, inequality solving, and exponent applications while reinforcing problem-solving and mathematical reasoning skills. Students build fluency with essential algebraic content and make clear connections to Algebra 1, ensuring readiness for success in future high school math courses.

Unit Calendar by Year



9 Units found and 46 Lessons found

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Algebra I

Title	Course Code	Credits	Grade/s
Algebra I	**301**	**1.0**	**9–12**

Description:
Algebra I builds a foundation for higher-level mathematics through the study of relationships between quantities, algebraic reasoning, and problem solving. Students explore linear, absolute value, exponential, and quadratic functions while learning to model and solve equations, inequalities, and systems. The course also introduces polynomial operations and bivariate data analysis, emphasizing connections among multiple representations and real-world applications aligned with the Common Core State Standards.

Waterbury Public Schools

Atlas

Algebra I

District High School / Mixed-grade High / Mathematics

Corbin, Elizabeth | Last Updated: Tuesday, Jun 30, 2026 by Corbin, Elizabeth

Course Description

Algebra I expands upon the properties of equality, relationships between variables, and algebraic reasoning developed in middle grades to create the foundation for all future mathematics courses. Topics include the study of patterns, an introduction to functions, modeling with and solving equations and inequalities, graphing and modeling linear functions in various forms, systems of equations, exploring exponential functions, and polynomials. In addition, students engage in a beginning study of bivariate data analysis including correlation and lines of best fit. Common Core State Standards are taught and reinforced as the student learns how to apply these concepts in real-life situations.

Unit Calendar by Year



5 Units found and 13 Lessons found

Waterbury Public Schools

Atlas

Algebra I ACE/ATOMS/SOAR/Accelerated/Honors

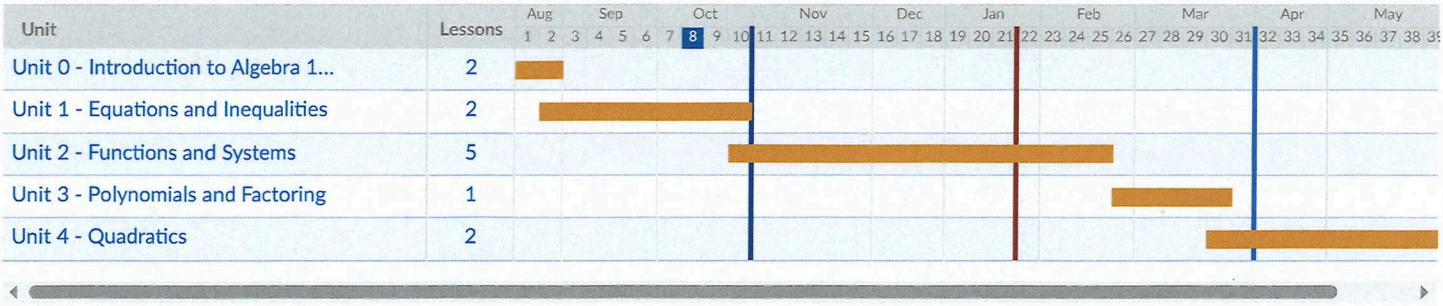
District High School / Mixed-grade High / Mathematics

Corbin, Elizabeth | Last Updated: Tuesday, Jun 30, 2026 by Corbin, Elizabeth

Course Description

Algebra I expands upon the properties of equality, relationships between variables, and algebraic reasoning developed in middle grades to create the foundation for all future mathematics courses. Topics include the study of patterns, an introduction to functions, modeling with and solving equations and inequalities, graphing and modeling linear functions in various forms, systems of equations, exploring exponential functions, and polynomials. In addition, students engage in a beginning study of bivariate data analysis including correlation and lines of best fit. Common Core State Standards are taught and reinforced as the student learns how to apply these concepts in real-life situations.

Unit Calendar by Year



5 Units found and 12 Lessons found

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Geometry

Title	Course Code	Credits	Grade/s
Geometry	**351**	**1.0**	**9–12**

Description:
Geometry develops students' understanding of shapes, angles, and spatial relationships through real-world applications. Students explore transformations, congruence, similarity, trigonometry, and coordinate geometry while learning to construct proofs, solve problems, and communicate mathematical reasoning. The course also covers three-dimensional figures, surface area, and volume, emphasizing connections between algebra and geometry.

Waterbury Public Schools

Atlas

Geometry

District High School / Mixed-grade High / Mathematics

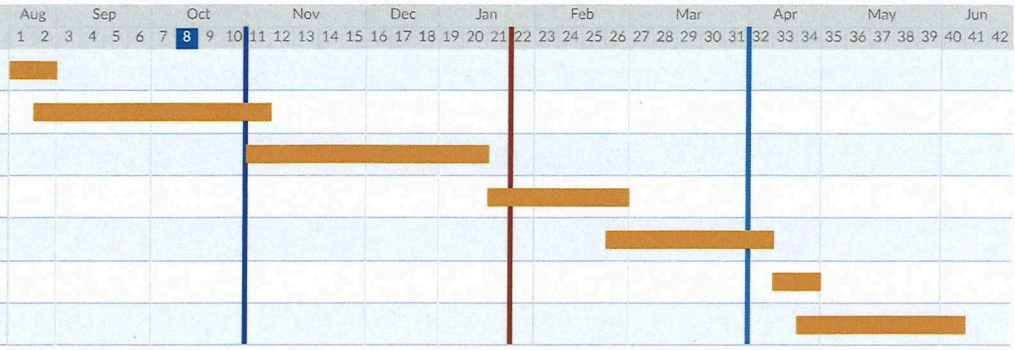
3 Curriculum Developers | Last Updated: Tuesday, Jun 30, 2026 by Corbin, Elizabeth

Course Description

Prerequisite: Successful completion of Algebra I. Based on the real-life applications of geometry, a student will investigate concepts in geometry such as congruence and similarity and apply that knowledge when conducting proofs and constructions. Coordinate geometry is also used, which integrates Algebra skills from the prior years. Critical thinking and problem-solving is emphasized as well as continued development of the skills needed to effectively communicate mathematical ideas.

Unit Calendar by Year

Unit	Lessons
Unit 0 - Introduction to...	2
Unit 1 - Foundations &...	2
Unit 2 - Transformations and...	3
Unit 3 - Triangles, Quadrilatera...	2
Unit 4 - Similarity and...	2
Unit 5 - Coordinate Geometry	1
Unit 6 - Circles and 2D/3D...	3



7 Units found and 164 Lessons found | 149 Lesson(s) with no Unit

Waterbury Public Schools

Atlas

Geometry ACE/ATOMS/SOAR/Accelerated/Honors

District High School / Mixed-grade High / Mathematics

Corbin, Elizabeth | Last Updated: Tuesday, Jun 30, 2026 by Corbin, Elizabeth

Course Description

Prerequisite: Successful completion of Algebra I. This is an accelerated course that focuses on an in-depth understanding of the relationships of congruence and similarity, the structures used to analyze them and the language used to communicate these ideas. Constructing proofs, use of coordinate geometry and the study of conic sections are included. This course requires a greater degree of independence and competence in critical thinking and communicating mathematically. ACE/ATOMS/SOAR classes work at a more rigorous pace and entail more independent work.

Unit Calendar by Year

Unit	Lessons
Unit 0 - Introduction to Geometry...	2
Unit 1 - Foundations & Parallel/Perpen...	2
Unit 2 - Transformations and Congruence	3
Unit 3 - Triangles, Quadrilaterals, & Oth...	2
Unit 4 - Similarity and Trigonometry	2
Unit 5 - Coordinate Geometry	1
Unit 6 - Circles and 2D/3D Models	3



7 Units found and 15 Lessons found

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Algebra II

Title	Course Code	Credits	Grade/s
Algebra II	**321**	**1.0**	**10–12**

Description:
Algebra II builds on concepts from Algebra I and Geometry through an in-depth study of linear, quadratic, polynomial, rational, exponential, logarithmic, and trigonometric functions. Students analyze and transform functions, solve equations and systems, and explore relationships involving complex numbers and the unit circle. The course emphasizes connections between algebraic and graphical representations while strengthening problem-solving and critical-thinking skills for advanced mathematics.

Waterbury Public Schools

Atlas

Algebra II

District High School / Mixed-grade High / Mathematics

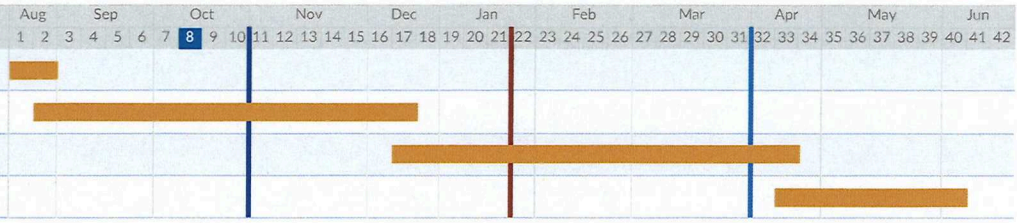
Corbin, Elizabeth | Last Updated: Tuesday, Jun 30, 2026 by Corbin, Elizabeth

Course Description

Prerequisite: Successful completion of Geometry. Algebra II students build on the skills acquired in Algebra I and Geometry, revisiting and expanding on their understanding of linear, absolute value, and exponential functions. In addition, quadratic, radical, logarithmic, and trigonometric functions are introduced. Students focus on exploring the connections between graphical representations and equations while they study transformations of various functions and apply their understanding of domain and range to explore asymptotes. Students also build onto their statistical foundation by looking at random sampling.

Unit Calendar by Year

Unit	Lessons
Unit 0 - Introduction to Algebr...	2
Unit 1 - Linear and Quadratic...	2
Unit 2 - Polynomial, Rational, ...	3
Unit 3 - Exponents and...	2



4 Units found and 9 Lessons found

Waterbury Public Schools

Atlas

Algebra II ACE/ATOMS/SOAR/Accelerated/Honors

District High School / Mixed-grade High / Mathematics

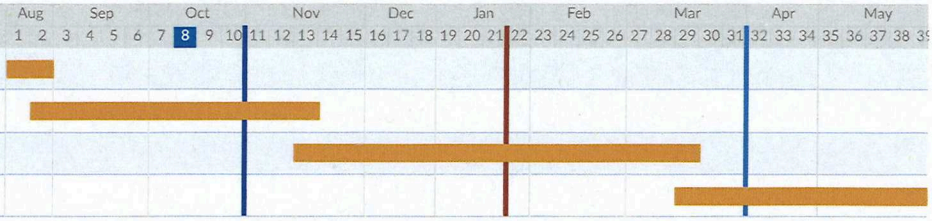
Corbin, Elizabeth | Last Updated: Thursday, Sep 3, 2026 by Corbin, Elizabeth

Course Description

Prerequisite: Successful completion of Geometry. The Honors level covers the same core skills as those in Algebra II but at a faster pace and with increased depth. In addition, students will extend their understanding of the number system to include complex numbers and explore how inequalities interact with systems and various functions including rational functions. Additional topics such as normal distribution and unit circles will be explored as time allows. ACE/ATOMS/SOAR classes work at a more rigorous pace and entail more independent work.

Unit Calendar by Year

Unit	Lessons
Introduction to Algebra 2...	2
Unit 1 - Linear and Quadratic Functions	2
Unit 2 - Polynomial, Rational, & Radical...	3
Unit 3 - Exponents and Logarithmic...	2



4 Units found and 9 Lessons found

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: PreCalculus

Title	Course Code	Credits	Grade/s
PreCalculus	**371**	**1.0**	**11–12**

Description:
Precalculus provides students with a strong foundation in advanced algebraic concepts and functions to prepare for college-level mathematics. Students explore polynomial, rational, exponential, logarithmic, and trigonometric functions, as well as discrete mathematics applications. Graphing technology is used extensively to analyze and model real-world relationships. Emphasis is placed on connecting algebraic, graphical, and numerical representations of functions.

Waterbury Public Schools

Atlas

Pre Calculus

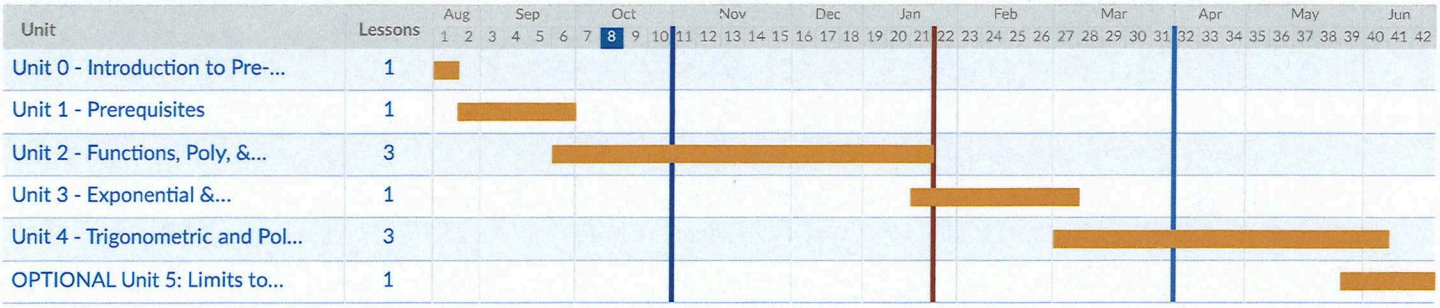
District High School / Mixed-grade High / Mathematics

3 Curriculum Developers | Last Updated: Wednesday, Jul 1, 2026 by Corbin, Elizabeth

Course Description

Prerequisite: Successful completion of Algebra II. This course is designed to provide a strong foundation of pre-calculus concepts, techniques, and applications to prepare students for more advanced work. It places appropriate emphasis on discrete mathematics and data analysis as the mathematical framework for many important contemporary applications. Units covered include polynomial, rational, exponential, logarithmic and inverse functions, graphs, and applications, trigonometry, and discrete mathematics. Extensive use of the graphing calculator will assist the student in a balanced approach to solving problems.

Unit Calendar by Year



6 Units found and 10 Lessons found

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Calculus

Title	Course Code	Credits	Grade/s
Calculus	**380**	**1.0**	**11–12**

Description:
This course develops students' understanding of limits, derivatives, and integrals as the foundations of calculus. Students explore limits and continuity, apply rules of differentiation to model real-world change, and study integration as the inverse of differentiation through the Fundamental Theorem of Calculus. Emphasis is placed on conceptual understanding, problem solving, and analytical reasoning to prepare students for advanced study in mathematics, science, and engineering.

Waterbury Public Schools

Atlas

Calculus Honors

District High School / Mixed-grade High / Mathematics

Corbin, Elizabeth | Last Updated: Tuesday, Jun 30, 2026 by Corbin, Elizabeth

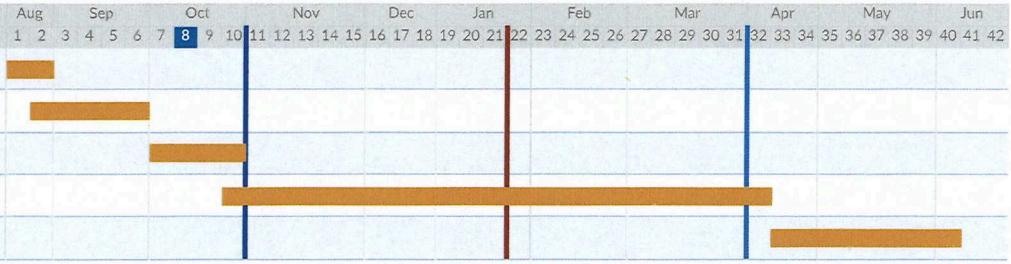
Course Description

Prerequisite: B or better in Precalculus.

This course serves to introduce students to the study of calculus. Students are exposed to several of the topics from the AP course. Students will be able to work with functions represented graphically, numerically, analytically, or verbally and will understand the connections among these representations; graphing calculators will be used as a tool to facilitate such understanding. Students will, in the process of solving problems, be able to use graphing calculators to graph functions, solve equations, evaluate numerical derivatives, and evaluate numerical integrals. Students will understand the meaning of the derivative as a limit of a difference quotient and will understand its connection to local linearity and instantaneous rates of change. Students will understand the meaning of the definite integral as a limit of Riemann sums and as a net accumulation of change over an interval, and they will understand and appreciate the connection between derivatives and integrals. Students will be able to model real-world behavior and solve a variety of problems using functions, derivatives, and integrals; they will also be able to communicate solutions effectively, using proper mathematical language and syntax.

Unit Calendar by Year

Unit	Lessons
Unit 0 - Introduction to Calculus	1
Unit 1 - Prerequisites and...	2
Unit 2 - Limits and Continuity	1
Unit 3 - Derivatives	3
Unit 4 - Trigonometric and Pol...	1



5 Units found and 8 Lessons found

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: SAT Prep Math

Title	Course Code	Credits	Grade/s
SAT Prep Math	**373**	**0.5**	**11**

Description:
This is a half-year course that reviews test-taking strategies and problem-solving techniques, and encourages both long-term and short-term preparation for the SAT and other standardized assessments. Tips on improving computational and reasoning skills are included. Practice sessions guide students to a better understanding of the problems that commonly appear on the SAT and related tests. The graphing calculator is used throughout the course.

Waterbury Public Schools

Atlas

Math SAT Prep

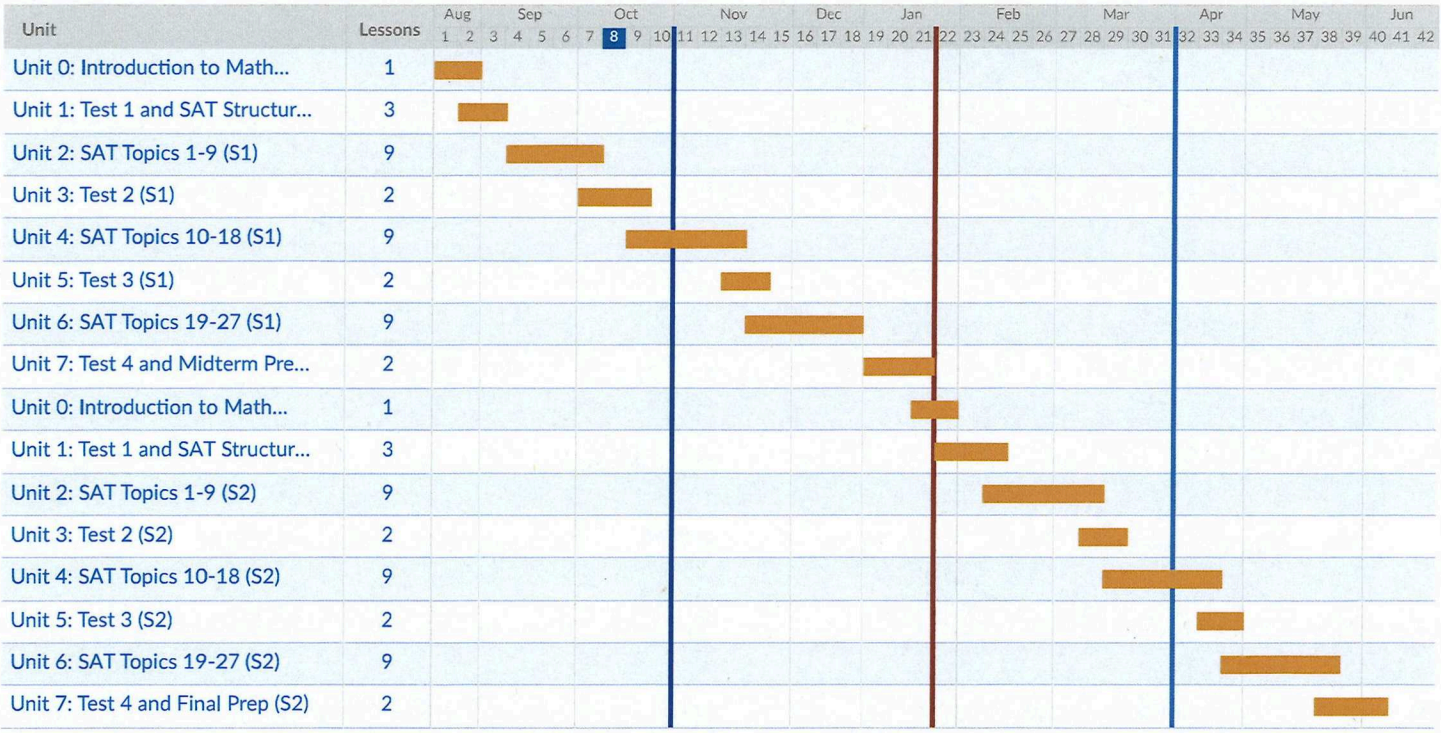
District High School / Mixed-grade High / Mathematics

Corbin, Elizabeth | Last Updated: Tuesday, Jun 30, 2026 by Corbin, Elizabeth

Course Description

This is a half-year course that reviews test-taking strategies and problem solving techniques, and encourages both long-term and short-term preparation for the SAT and other standardized assessments. Tips on improving computational and reasoning skills are included. Practice sessions guide students to a better understanding of the problems that commonly appear on the SAT and related tests. DESMOS is used throughout the course to support graphing.

Unit Calendar by Year



Unit	Lessons
Unit 0: Introduction to Math...	1
Unit 1: Test 1 and SAT Structur...	3
Unit 2: SAT Topics 1-9 (S1)	9
Unit 3: Test 2 (S1)	2
Unit 4: SAT Topics 10-18 (S1)	9
Unit 5: Test 3 (S1)	2
Unit 6: SAT Topics 19-27 (S1)	9
Unit 7: Test 4 and Midterm Pre...	2
Unit 0: Introduction to Math...	1
Unit 1: Test 1 and SAT Structur...	3
Unit 2: SAT Topics 1-9 (S2)	9
Unit 3: Test 2 (S2)	2
Unit 4: SAT Topics 10-18 (S2)	9
Unit 5: Test 3 (S2)	2
Unit 6: SAT Topics 19-27 (S2)	9
Unit 7: Test 4 and Final Prep (S2)	2

16 Units found and 158 Lessons found | 84 Lesson(s) with no Unit

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Statistics 1

Title	Course Code	Credits	Grade/s
Statistics 1	**394**	**0.5**	**12**

Description:
This course introduces students to foundational concepts in statistics, focusing on understanding and interpreting data. Students will explore various methods of organizing and displaying data, including dot plots, histograms, and scatter plots. They will learn to measure data, compare data, and use statistics to analyze data distributions. This course will also utilize two-way and frequency tables to analyze relationships within data. Students will demonstrate their understanding of these concepts through projects and hands-on activities.

WATERBURY
PUBLIC SCHOOLS

Academic Office

One Page Curriculum Committee Summary

Academic Department: Secondary Mathematics Name of Curriculum/Course: Statistics 2

Title	Course Code	Credits	Grade/s
Statistics 2	**394B**	**0.5**	**12**

Description:
This course builds upon foundational statistical concepts, diving deeper into probability and its applications. Students will explore probability events to calculate outcomes and assess likelihoods. Key concepts will additionally include work on statistical questions, sampling methods, analysis of data distributions, and hypothesis testing. By the end of the course, students will have advanced skills in statistical reasoning and decision-making.

Waterbury Public Schools

Atlas

Statistics 1 and 2

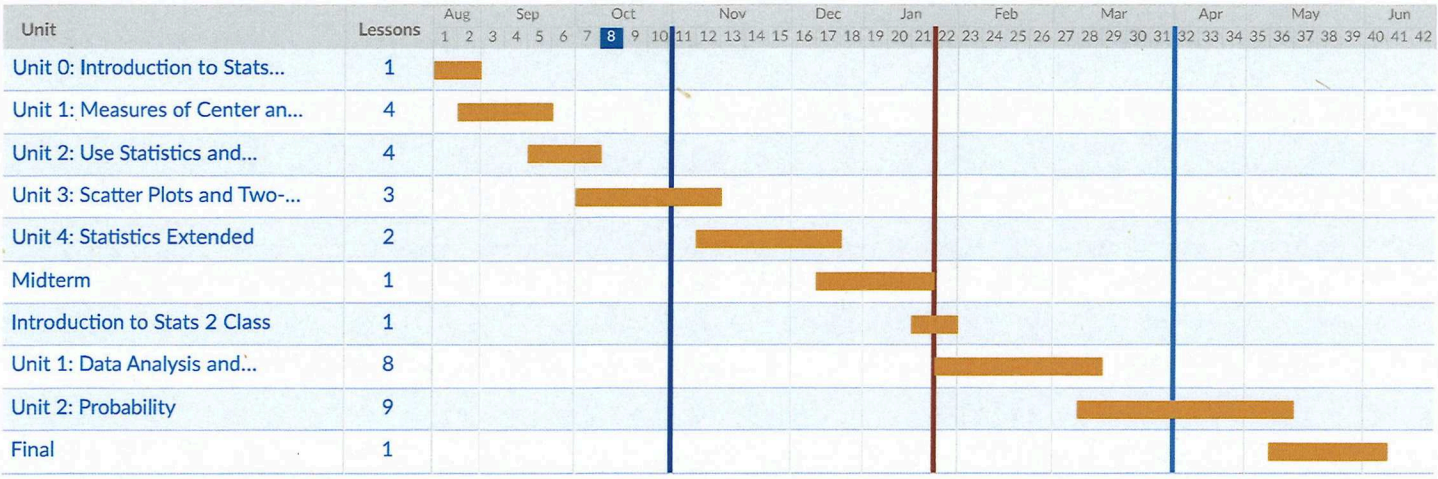
District High School / Grade 12 / Mathematics

4 Curriculum Developers | Last Updated: Wednesday, Jul 1, 2026 by Corbin, Elizabeth

Course Description

Prerequisite: Successful completion of Algebra II. This is a one semester course for students who are interested in exploring the applications of trigonometry to the real world. After reinforcing understandings of right triangle trigonometry functions from Geometry, students extend their thinking to trigonometric functions, laws and applications.

Unit Calendar by Year



Unit	Lessons
Unit 0: Introduction to Stats...	1
Unit 1: Measures of Center an...	4
Unit 2: Use Statistics and...	4
Unit 3: Scatter Plots and Two-...	3
Unit 4: Statistics Extended	2
Midterm	1
Introduction to Stats 2 Class	1
Unit 1: Data Analysis and...	8
Unit 2: Probability	9
Final	1

10 Units found and 34 Lessons found

#5

WATERBURY Public Schools

Academic Office

One Page Curriculum Committee Summary

Academic Department: Career and Technical Education

Grade/s: 10-12

Name of Curriculum/Course: Cybersecurity 1 and 2

Summary of Proposed Curriculum/Textbook Updates: CodeHS Foundations of Cybersecurity. Entire curriculum and teacher resources and training provided by CodeHS. CodeHS is a leading all-in-one Computer Science provider.

Digital Footprint and Responsibility ● Personal Data Collection and Security 1 ● Cyber Ethics and Laws ● Cybersecurity Essentials ● Common Cyber Attacks and Prevention Cryptography: Then, Now and Future ● Symmetric Encryption ● Asymmetric Encryption ● Public Key Encryption ● Authentication Methods ● Digital Certificates Ciphers ● Cryptographic puzzles ● Testing Operating Systems ● Software and Applications ● Application Security ● Browser Configuration ● System Administration ● Command Line Interface Computers Speak Binary ● Encoding Text and Images in Binary ● IP Addresses ● Routing and Packets ● Protocols: TCP, UDP, HTTP/HTTPS ● How do Websites Work? ● OSI Model ● Impact of the Internet nternal Components of a Computer ● Peripheral Devices ● Network Devices ● Storage and Network Options ● Network Communication ● Network Management Troubleshooting Methodology ○ Identify the problem ○ Research past solutions ○ Establish a theory ○ Test the theory ○ Establish a plan of action ○ Implement the solution ○ Verify functionality ○ Document findings ● Cybersecurity Career Pathways ● Customer Service and Communication ● Contributing to a Knowledge Base ● Creating an Instructional Video Data as a Resource ● Databases ● Security in Coding ● Environmental Controls ● Risk Management

If High School Curriculum:

Title	Course Code	Credits	Grade/s
Cybersecurity 1 and 2	**759/762**	**0.5 / 0.5**	**10-12**
Description: In this Fundamentals of Cybersecurity course, students will gain a comprehensive understanding of the digital world they navigate every day. Students will be exposed to the inner workings of computer hardware and software, explore the intricacies of how networks connect, and dive into the world of encryption and cryptography. They will also learn the importance of safeguarding our increasingly digital world from unauthorized access, ensuring the privacy and integrity of data. By understanding these fundamental building blocks, students will be able to identify and defend against potential cybersecurity threats. This comprehensive approach will ensure that students are well-prepared to navigate the ever-evolving cybersecurity landscape.			

#6

WATERBURY
Public Schools

Academic Office
One Page Curriculum Committee Summary

Academic Department: Career and Technical Education

Grade/s: 11-12

Name of Curriculum/Course: Cybersecurity 3

Summary of Proposed Curriculum/Textbook Updates: CodeHS Foundations of Cybersecurity. Entire curriculum, teacher resources, and training provided by CodeHS. CodeHS is a leading all-in-one Computer Science provider.

Encryption Algorithms ● Public Key Encryption ● Hash Functions ● Asymmetric Encryption ● Digital Certificates Steganography ● Data Hiding and Extraction ● Encryption Algorithms ● Peer Collaboration Network Attacks ● Malware Types and Prevention ● Common Network Attacks ● Additional Attacks ● Cross-Site Scripting ● Internal Threats Threats, Vulnerabilities & Exploits ● Cyber Case Investigation ● Security Breaches & Ethics ● Security Baselines & Policies ● Network Defenses & Protocols Network Log Analysis ● File Metadata Inspection ● Image Forensics via EXIF Data Advanced Devices ● Environmental Controls ● Protocols and Standards ● Private Networks ● Mobile Devices ● Access Control Internet Evolution & Network Growth ● Network Models & Architectures ● Networking Services & Protocols ● Network Security & Design LAN Methodologies ● Network Topologies ● Perimeter Networks (DMZ) ● Ethernet Standards 7 ● LAN Cabling Identifying Risks ● Assessing Risks ● Risk Response ● Penetration Testing User Training ● Incident Response Plans ● Data Policy and Privacy ● Change Management Structuring Data in SQL ● Basic Querying in SQL using SELECT ● Filtering Queries in SQL using WHERE ● Advanced Filters (BETWEEN, LIKE, IN) ● Ordering Results using ORDER BY ● Renaming Fields using AS ● Joining Tables using JOIN Printing ● Variables ● Types ● User Input ● Converting Input Types ● Arithmetic Expressions ● String Operators ● Comments ● Programming Languages If Statements ● Boolean Values ● Logical Operators ● Comparison Operators ● Floating Point Numbers Design Thinking ● Prototyping ● Testing ● Project Prep and Development

If High School Curriculum:

Title	Course Code	Credits	Grade/s
Cybersecurity 3	**783**	**1.0**	**11-12**
Description: In this course, students build on their foundational cybersecurity knowledge to explore complex concepts in data protection, secure communications, and threat defense. Through interactive lessons, hands-on coding, and investigative projects, students learn how to protect data, verify communications, and mitigate cyber threats. They'll take on the roles of cryptographers, forensic analysts, and network architects as they tackle real-world security challenges and engineer creative solutions. Through projects like building steganographic tools and crafting security policies, students gain technical expertise and critical-thinking skills for the digital age.			

#7

WATERBURY
Public Schools

Academic Office
One Page Curriculum Committee Summary

Academic Department: Career and Technical Education

Grade/s: 9-12

Name of Curriculum/Course: Foundations of Engineering, Invention, and Innovation

Summary of Proposed Curriculum/Textbook Updates: Activities / Projects

Build a Better Mousetrap - The economic desire for the product, coupled with using the engineering design process to create a new product, complete with a prototype and marketing plan/materials

Paper and Small Wood/Recycled Materials Towers- The role of structural forces in designing the physical plant, machinery, and structures that everything from homes and working spaces to the energy grid, and space travel rely on.

Paper/Foam Airplanes- Exploration of flight and aerodynamic principles from gliding to powered flight.

Identify and determine a Need for you and Your Surroundings (home, family, school, community, team, or club), design a solution, prototype it, deploy it, and report on the outcomes and feedback. Your solutions must incorporate at least two of the following build/making/manufacturing processes: 3D printing, digital printing and design, heat press, painting/finishing, laser cutting/engraving, wood or plastic or paper/cardboard or foam or metal, digital programming or electronic components, or other processes or materials as approved by the teacher.

School Need-Based Project- Working with a teacher, group, team, or administrator, identify a need "product," design it and the marketing materials, along with the budget for the "project/product", win approval of the group in need and the course teacher, then create the

“project/product” for use, presenting both the pitch for the product/project approval and the final product release/outcome at semester end.

If High School Curriculum:

Title	Course Code	Credits	Grade/s
Foundations of Engineering, Invention, and Innovation	**781**	**0.5**	**9-12**
Description: This introductory course focuses on the engineering design process and its role in invention and innovation. The course provides students with a comprehensive survey of the technological and economic landscapes as they pertain to the invention and innovation of solutions (products) that enter the marketplace for consumers or aid and advance the production of marketable products. Students explore the engineering design process, invention and innovation, technology development, and deployment. Specifically, students will be analyzing the development of new solutions and their effects on society, culture, the economy, and the environment. That analysis will occur as they identify the needs of a group of consumers or businesses and then develop and present those solutions as tested prototypes. Within this class, students will be exposed to career paths across the product pipeline, from design, engineering, and manufacturing to marketing and business operations.			

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WATERBURY
Public Schools

Academic Office
One Page Curriculum Committee Summary

Academic Department: Career and Technical Education

Grade/s: 9-12

Name of Curriculum/Course: Design, Engineering, and Entrepreneurship

Summary of Proposed Curriculum/Textbook Updates: Activities / Projects

Design and Produce- Create an idea for a product that requires an engineering and technology-based solution for a marketable product. Develop the pitch and prototype, including marketing materials and a sample product, during the early prototype phase. Pitch to the audience, including members of the Chamber of Commerce and Manufacturing Association.

School and/or Business Community Need-Based Project- Working with a teacher, group, team, administrator, another school, or an area business partner, identify a need, "product" design it and the marketing materials, along with the budget for the "project/product", win approval of the group in need and the course teacher, then create the "project/product" for use, presenting both the pitch for the product/project approval and the final product release/outcome at semester end.

Create and present at the beginning, middle, and end of the semester your engineering design process notebook/portfolio, combining your handwritten/hand-drawn work with digital and physical artifacts of items designed, prototyped, revisions of designs, and final products.

If High School Curriculum:

Title	Course Code	Credits	Grade/s
Design, Engineering, and Entrepreneurship	**782**	**0.5**	**9-12**
Description: Serving as a "horizon-broadening experience," this intermediate-level course uses a project-based laboratory to practice professional skills required in 21st-century STEM/STEAM (Science, Technology, Engineering, Art, and Math) industries. Students transition from theoretical knowledge to the practical application of building and managing a venture. Students will continue to explore the engineering design process, the nature of invention and innovation, technology development, and deployment. Specifically, students will be paired with a community group or company with a specific need for a product/solution. Students, in conjunction with the teacher and a mentor/representative from the "customer," will analyze the need, develop solutions, test them, and present the prototypes. With the teacher and "customer," select a solution and then implement it. The whole process and the solution will be presented in class and to the community. Within this class, students will be exposed to career paths across the product pipeline, from design, engineering, and manufacturing to marketing and business operations.			