Course Overview

Content Area:
Course(s):
Time Period: **Year**
Length: **180**
Status: **Published**

Course Overview

Aligned to Standards: NJSLS 2023

Revision Date: 2024

In compliance with the NJ Student Learning Standards, climate change, career readiness, DEI (Diversity, Equity, & Inclusivity), as well as other standards have been integrated within the NBCRSD curricula (NJ Administrative Code Title 6A: chapter 8; Title 18A: chapter 35).

Course Overview

Sequence- Unit Titles, Summaries, and Number of weeks per unit (total = 18 semester/36 year)

Unit 01: The Number System (Chapters 1 & 2)

Chapter 1:

- In this chapter, students draw on their knowledge of exponents to develop understanding of the properties of exponents and scientific notation. They use this to build fluency with simplifying algebraic expressions involving powers and computing with scientific notation. They apply their fluency to solve multi-step real-world problems.

Chapter 2:

- In this chapter, students draw on their knowledge of the set of rational numbers to devop understanding of the set of real numbers. They use this understanding to build fluency with determining if numbers are rational or irrational, finding Roots of perfect Squares and cubes, and estimating Roots of numbers. They apply their fluency to solve multi-step real-world problems.

Unit 02: Expressions and Equations (Chapters 3, 4, & 6)

In this unit, students draw on their knowledge of solving one and two-step equations to build fluency with solving equations with variables on each side. They apply their fluency with solving equations with variables on each side. They apply their fluency to solve real-world problems by writing and solving multi-step equations. Using their knowledge of solving multi-step equations, they determine if an equation has one, no, or infinitely many solutions.

Students will draw on their knowledge of proportional relationships to develop understanding of the concept of slope. They use this understanding to build fluency with finding the slope of a line, and writing and graphing linear equations. They apply their fluency to solve multi-step real-world problems.

Students draw on their knowledge of linear equations to develop understanding of how to solve and determine the number of solutions to a system of two linear equations. They use this understanding to

build fluency with solving a system of equations graphically and algebraically. They apply their fluency to solve real-world problems.

Unit 03: Functions (Chapter 5)

In this unit, students draw on their knowledge of linear relationships to develop understanding of functions. They come to understand how to identify functions and the graphs of functions. Students use this understanding to build fluency with constructing linear functions and identifying nonlinear functions. They apply their understanding by comparing linear functions and analyzing functions qualitatively.

Unit 04: Triangles and the Pythagorean Theorem (Chapter 7)

In this module, students draw on their knowledge of angles and triangles to develop *understanding* of special angle pairs and the the Pythagorean Theorem. They use this understanding to build fluency with finding missing angle measures and side lengths of right triangles. They apply their fluency to solve multi-step, real world problems.

Unit 05: Transformations (Chapter 8)

In this module, students draw on their knowledge of graphing in the coordinate plane to develop understanding of transformations. They use their understanding to build fluency with graphing and describing translations, reflections, rotations, and dilations using coordinates.

Unit 06: Congruence and Similarity (Chapter 9)

In this module, students draw on their knowledge of transformations to develop understanding that two figures are congruent or similar if the second figure can be obtained from the first by a series of transformations. They use their understanding to build fluency with naming corresponding parts of congruent and similar figures. They apply their fluency to solve real-world indirect measurement problems.

Unit 07: Volume (Chapter 10)

In this module, students will draw on their knowledge of finding volume of prisms to develop *understanding* of how to find the volume of cylinders, cones, and spheres. They use this understanding to build *fluency* with finding missing dimensions and finding volume of composite figures. They *apply* their fluency to solve real world volume problems.

Unit 08: Scatter Pots and Data Analysis (Chapter 11)

In this unit, students draw on their knowledge of linear functions and relative frequency to develop understanding of scatter plots and two-way tables. They use their understanding to build fluency with constructing and interpreting scatter plots and two-way tables. They apply their understanding to solve real-world problems that involve lines of fit and associations in two-way tables.

Reporting Student Progress (link to NB's Assessment System) All courses follow a balanced assessment system with Practice and Assessments. Each category includes formative, summative and alternative assessments.
Accommodations and Modifications (link to menu) Integrated accommodations and modifications for special education students, English language learners, students at risk of school failure, gifted and talented students, and students with 504 plans. Reveal curriculum provides "Approaching Level", "On Level", and "Beyond Level" expectations, with different questioning techniques, remedial/ reteaching information, and extension activities.