K-12 MATHEMATICS Scope & Sequence
SADDLE BROOK SCHOOL DISTRICT

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COURSE RATIONALE

The economy in which graduates of our schools will seek employment is more competitive than ever and is rapidly changing in response to advances in technology. To compete in today's global, information-based economy, students must be able to solve real problems, reason effectively, and make logical connections. In this changing world those who have a good understanding of mathematics will have many opportunities and doors open to them throughout their lives. Today's workforce requires mathematical knowledge and skills in areas such as data analysis, problem-solving, pattern recognition, statistics and probability; therefore, our school's curriculum must prepare students for these expectations.

The Saddle Brook School District is committed to providing all students with the opportunity and the support necessary to learn significant mathematics with depth and understanding. To that end, students will engage in a wide variety of learning activities designed to develop their ability to reason and solve complex problems. Calculators, computers, manipulatives, technology, and the Internet will be used as tools to enhance learning and assist in problem solving. Group work, projects, literature, and interdisciplinary activities will make mathematics more meaningful and aid understanding. Classroom instruction will be designed to meet the learning needs of all children and will reflect a variety of learning styles.

The science curriculum fosters students who:
- Develop computational, conceptual, problem-solving and reasoning skills
- Demonstrate their understanding of mathematical concepts based on higher levels of mathematical thought
- Use technology and other tools as an integral part of solving mathematical problem

New Jersey Student Learning Standards

The New Jersey Student Learning Standards provide a consistent, clear understanding of what students are expected to learn. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers. With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global community.

A complete copy of the New Jersey Student Learning Standards for Grades K-12 Mathematics may be found at:

http://www.state.nj.us/education/cccs/2016/math/standards.pdf

Grade K: Scope and Sequence

Quarter I

Patterning and Classifying	Counting and Cardinality (1-10)
On-Going/ 3 week initial	**6 weeks**
• Recognizing patterns • Extending and creating patterns • Sorting objects by one commonality • Counting Objects	• Numbers 1-10 – numerals, names and decomposing numbers • One to one correspondence • Counting order and counting forward • Quantifying/ relationship between number and quantity • Comparing numbers • Skip counting to 100 (5s and 10s)

Quarter II

Addition and Subtraction (1-10)	Counting and Cardinality (11-20)
8 weeks	**6 weeks**
• Decomposing numbers 1-10 • Representing addition and subtraction, in multiple ways, up to 10 • Solving word problems up to 10 • Fluency	• Numbers 11-20 numerals, names and decomposing numbers • One to one correspondence • Counting order and counting forward • Quantifying/ relationship between number and quantity • Comparing numbers • Skip counting to 100 (2s, 5s, and 10s) Place value for 11-20 • Decomposing into tens and ones • Different representations of 11-20

Quarter III

Counting and Cardinality (11-20)	Units of Measure, Comparisons, Categorizing and Recording Data
6 weeks (continued from Quarter II)	**5 weeks**
• Numbers 11-20 numerals, names and decomposing numbers • One to one correspondence • Counting order and counting forward • Quantifying/relationship between number and quantity • Comparing numbers • Skip counting to 100 (2s, 5s and 10s) • Place value for 11-20 • Decomposing into tens and ones	• Measurable attributes of objects (length, height and weight) • Comparing objects by different attributes • Measurement tools • Units of measure

Quarter IV

Geometry	Time and Money
6 weeks	**2 weeks**
• Recognize and name 2D and 3D shapes • Recognize shapes in the environment • Differentiate between 2D and 3D shapes • Manipulate shapes to make other shapes • Positional words	• Recognizing hour and minute hand • Tell time to the hour • Purpose of clocks and types • Identifying coins and one dollar • Value of coins and one dollar

Quarter I

Addition and Subtraction Concepts
6 weeks
- Addition
  - Use pictures and models to add within 10
  - Read, write, solve addition sentences
  - Commutative Property
  - Identity Property
  - Ways to put together numbers to 10
- Subtraction
  - Use pictures and models to subtract within 10
  - Read, write, solve subtraction sentences
  - Compare to subtract
  - Subtract all or 0
  - Ways to take apart numbers to 10
- Relationship between addition and subtraction
- Solve word problems

Addition Strategies
4 weeks
- Addition Strategies
  - Count on 1, 2, 3
  - Doubles
  - Doubles + 1
  - Doubles - 1
  - Make a 10
- Commutative Property of Addition
- Associative Property of Addition
- Using a 10 frame
- Decompose numbers to make a double
- Decompose numbers to make a 10
- Add 3 numbers
- Solve word problems

Quarter II

Subtraction Strategies
3 weeks
- Subtraction strategies
  - Count back 1,2,3
  - Think addition to subtract
  - Use 10 to subtract
  - Break apart a 10 to subtract
- Solve word problems

Addition and Subtraction Relationship
4 weeks
- Addition and Subtraction Relationship
- Related facts
- Use addition to check subtraction
- Choose an operation and solve word problems
- Ways to make numbers to 20
- Equal and not equal equations
- Addition and subtraction fluency within 20

Quarter III

Number and Operations in Base Ten
8 weeks
- Count by 1's, 5's, 10's to 120
- Place value
  - Understand tens and ones
  - Represent two-digit numbers in different but equivalent forms
  - Model, read, and write numbers to 120
- Comparing Numbers
  - Greater than, less than, equal to
  - Identify ten less or ten more
- Two-digit Addition and Subtraction
  - Add and subtract tens
  - Add ones to a two-digit number
  - Make a ten to add ones to a two-digit number
  - Add tens and ones to a two-digit number
  - Solve word problems

Time and Money
4 weeks
- Time
  - Hour and minute hand
  - Tell time on an analog clock
  - Tell time on a digital clock
  - Time to the hour
  - Time to the half hour
  - Number of minutes in an hour
  - Number of hours in a day

- Money
  - Count by 1's, 5's, 10's
  - Identify penny, nickel, dime, quarter
  - Value of penny, nickel, dime, quarter
  - Value of a dollar
  - Count coins
  - Count mixed sets of coins

Quarter IV

Measurement and Data
3 weeks
- Measurement
  - Order length (shortest, longest)
  - Solve word problems
  - Measure using nonstandard units
  - Compare lengths
  - Reasoning and logic
- Graphs
  - Picture graphs
  - Bar graphs
  - Read and interpret data
  - Survey and create graphs
  - Solve word problems
- Tally Charts
  - Read and interpret data
  - Survey and create tally charts
  - Apply data to create graphs
  - Solve word problems

Geometry
3 weeks
- Three-Dimensional Geometry
  - Identify shapes (cube, cone, sphere, cylinder, rectangular prism
  - Sort objects by attributes
  - Create composite shapes
  - Number of flat and curved surfaces on each three-dimensional shape
  - Two-dimensional shapes on three-dimensional shapes
  - Three-dimensional shapes in the real world
- Two-Dimensional Geometry
  - Identify shapes (circle, hexagon, rectangle, square, triangle)
  - Sort objects by attributes
  - Number of sides and vertices on each two-dimensional shape
  - Create composite shapes
  - Combine shapes to solve two-step word problems
  - Decomposed combined shapes
  - Equal and unequal shares
  - Fractions (whole, halves, fourths)

Grade 2: Scope and Sequence

Quarter I

Operations: Addition and Subtraction
3 weeks
- Addition
  - Writing equations
  - Solving word problems
  - Key words
  - Commutative property
  - Compliments of ten

- Subtraction
  - Writing equations
  - Solving word problems
  - Key words
- Computational Fluency
  - Numbers within 20
  - Fact families

Strategies
3 weeks
- Counting On
- Number Line
- Doubles
- Doubles Plus 1
- Compliments of ten

Quarter II

Place Value
3 weeks
- Tens and Ones
- Greater than, less than, equal to
- Rounding
- Numbers through 1,000

Addition with Two Digit Numbers
4 weeks
- Without Regrouping
- With Regrouping
- Estimation and Answer Reasonableness

Addition with Three- Digit Numbers
4 weeks
- Without Regrouping
- With Regrouping
- Estimation and Answer Reasonableness

Quarter III

Subtraction with two-digit numbers
4 weeks
- Without Regrouping
- With Regrouping
- Estimation and Answer Reasonableness

Subtraction with Three-digit Numbers
4 weeks
- Without Regrouping
- With Regrouping
- Estimation and Answer Reasonableness

Money
3 weeks
- Value of Coins and Bills
- Value of Coin/Bill Combinations
- Create Amounts of Money
- Determine change from Purchases

Time
3 weeks
- Time to the five minute
- AM and PM
- Calendar Skills

Quarter IV

Measurement - 3 weeks
- Inches, feet, centimeters and meters
- Compare lengths
- Measurement word problems

Data - 2 weeks
- Line plot
- Circle Graph
- Picture Graph
- Bar Graph
- Probability

Geometry - 2 weeks
- Two-dimensional and three-dimensional shapes
  - Faces
  - Angles
  - Vertices
  - Edges
- Compose and decompose shapes
- Congruent figures
- Symmetry

Fractions - 2 weeks
- Equal and Unequal Parts
- Halves
- Thirds
- Fourth

Grade 3: Scope and Sequence

Quarter I

Addition, Subtraction & the Number System **6 weeks** ● The Number System ○ Place Value ○ Writing Numbers ○ Rounding Numbers ○ Numbers 1-1000	● Addition ○ 2 and 3 digit numbers up to 1000 ○ Commutative Property ○ Associative Property ● Subtraction ○ 2 and 3 digit numbers, including zeros ○ Regrouping ○ Relationship between addition and subtraction	**Read and Interpret Data** **4 weeks** ● Data Analysis ○ Graphs ○ Charts and Tables

Quarter II

Operations & Algebraic Thinking: Multiplication Concepts **6 weeks** ● Multiplication Concepts ○ Purpose of multiplication ○ Relationship between multiplication and addition ○ Arrays, skip counting, and the number line ○ Commutative Property of Multiplication ○ Identity Property of Multiplication ○ Multiplying by zero ○ Solving 1 step multiplication word problems	**Operations & Algebraic Thinking: Multiplication** **5 weeks** ● Multiplication ○ Multiplication facts 0-10 ○ Strategies for learning multiplication facts ○ Distributive Property and the Associative Property of multiplication ○ Patterns as multiplication strategies ○ Solving 2 step multiplication word problems

Quarter III

Operations & Algebraic Thinking: Division **6 weeks** ● Division ○ Purpose of Division ○ Division as the equal sharing of objects in a group ○ Relationship between division and subtraction ○ The use of arrays to help solve division problems ○ Inverse relationship between division and multiplication ○ Strategies/rules to divide with whole numbers 1-10 ○ Solving 2-step problems involving the 4 learned operations ○ Order of operations	**Numbers and Operations: Fractions** **5 weeks** ● Fractions ○ Fraction Concepts ○ Fractional Relationships ○ Fraction Models ○ Equivalent fractions

Quarter IV

Geometry and Geometric Measurements **5 weeks** ● Two Dimensional Shapes ○ Polygons ○ Quadrilaterals ○ Types of lines ● Measurement ○ Area ○ Perimeter	**Measurement and Data** **6 weeks** ● Measurement ○ Customary and metric units of length ○ Customary and unit units of capacity and weight ○ Customary units of time

Quarter I

Place Value, Addition and Subtraction
4 weeks
- Place Value
  - Compare and order numbers
    - Inequality symbols
  - Round numbers
  - Rename numbers
    - Standard and expanded forms
- Addition to One Million
  - Add whole numbers
    - Estimation
    - Answer reasonableness
- Subtraction to One Million
  - Subtract whole numbers
    - Estimation
  - Answer reasonableness
- Patterns
  - Shape
  - Number

Number and Operations in Base Ten/Operations and Algebraic Thinking – Multiplication
6 weeks
- Multiplication
  - Factor pairs
  - Common factors
  - Multiples
  - Prime and composite numbers
  - Multiply by tens, hundreds, thousands
  - Estimate products
  - Multiplication strategies
    - Arrays
    - Area models
    - Commutative, associative, distributive, zero and identity properties
    - Expanded form
    - Partial products
    - Mental math
  - Multiply up to four digits by one digit using regrouping
  - Multiply two-digit by two-digit numbers using strategies and regrouping

Quarter II

Number and Operations in Base Ten/Operations and Algebraic Thinking – Division
5 Weeks
- Division
  - Estimate quotients
  - Interpret remainders
  - Division strategies
  - Repeated subtraction
  - Partial quotients
  - Division by one-digit numbers
  - Rules of Divisibility

Fractions- Equivalence, Comparison, Adding, and Subtracting
5 weeks
- Fractions
  - Equivalent fractions
  - Simplest form
  - Common denominators
  - Comparing fractions
  - Ordering fractions
  - Problem solving
  - Write fractions as sums
  - Add and subtract fractions using models
  - Rename fractions and mixed numbers
  - Add and subtract mixed numbers
  - Multi-step fraction word problems

Quarter III

Multiply Fractions by Whole Numbers & Relate Fractions and Decimals
4 weeks
- Multiplication of Fractions
  - Multiples of unit fractions
  - Multiples of fractions

Measurement and Data
7 Weeks
- Angles
  - Fractional parts of a circle and degrees
  - Measure and draw angles
  - Join and separate angles

- o   Multiply fraction by whole number
- o   Multiply fraction or mixed number by whole number
- o   Comparison problems
- Fractions and Decimals
  - o   Relate tenths and decimals
  - o   Relate hundredths and decimals
  - o   Equivalent fractions and decimals
  - o   Relate fractions, decimals, and money
  - o   Solve word problems with money

Add fractional parts of 10 and 100

- o   Finding unknown angle measures
- Perimeter and area
  - o   Perimeter
  - o   Area of combined rectangles
  - o   Find unknown measures
- Measurement units
  - o   Measurement benchmarks
  - o   Customary units of length
  - o   Customary units of weight
  - o   Customary units of liquid volume
  - o   Line plots
  - o   Metric units of length, mass, & liquid volume
  - o   Units of time and elapsed time
  - o   Mixed measurements

Patterns in measurement units

Quarter IV

Geometry
4 weeks
- Geometry
  - o   Lines, Rays, and Angles
  - o   Classify Triangles
  - o   Parallel and Perpendicular Lines
  - o   Classify Quadrilaterals
  - o   Line Symmetry

Financial Literacy
5 weeks
- Problem Based Learning
  - o   Career identification
  - o   Income
  - o   Taxes
  - o   Budget
    - ·   Savings and spending plans
    - ·   Cash, credit, debit
  - o   Financial risks
  - o   Risk management strategies

Grade 5: Scope and Sequence

Quarter I

Operations, Algebraic Thinking and Place Value 3-4 Weeks	Perform Operations with Multi-Digit Whole Numbers 4-5 weeks
- Place Value - Expanded form - Value of a digit - Powers and exponents - Numerical Expression - Order of operations - Properties of operations - Parentheses - Operations - Multiplication by 1 digit - Multiplication by 2 digits - Relate multiplication to division	- Division - Place the first digit - Divide by 1 digit - Partial quotients - Estimate with 2 digit divisors - Interpret the remainder - Adjust quotients - Solve problems

Quarter II

Number and Operations: Addition and Subtraction with Decimals 4 weeks	Number and Operations: Multiplication and Division with Decimals 5 weeks
- Decimal Operations - Addition to the hundredths - Subtraction to the hundredths	- Decimal Operations - Multiplication to the hundredths - Division to the hundredths

Quarter III

Number and Operations: Fractions 8 weeks	Geometry and Volume 3 weeks
- Adding and Subtracting Fractions - Greatest common factor - Least common multiple - Mixed numbers and improper fractions - Equivalencies - Addition - Subtraction - Multiplying and Dividing Fractions - Multiplication - Whole number by fraction - Fraction by fraction - Estimating products - Calculating area - Division - Fraction by whole number - Whole number by fraction - Fraction as a division problem	- Geometry - Polygons - Properties of - Regular - Irregular - Volume - Solid figures - Volume of regular shapes - Volume of irregular shapes

Quarter IV

Measurement Conversions	Patterns and Graphing

3 weeks	5 weeks

● Measurement Conversions
    ○ Standard
    ○ Metric
    ○ Time
	● Represent and Interpret Data
	    ○ Line plot
	        ▪ Using fractions of a unit
	        ▪ Add, subtract, multiply, and divide data
	    ○ Coordinate Planes
	        ▪ Coordinate grid
	        ▪ Ordered pairs
	    ○ Measures of central tendency
	        ▪ Mean
	        ▪ Medium
	        ▪ Mode
	        ▪ Range

Grade 6 : Scope and Sequence

Quarter I

The Number System: Whole Numbers, Decimals, and Fractions
6 Weeks
- Whole Numbers
  - Dividing multiple digit numbers
  - Factors and multiples
    - Prime factorization
    - Greatest common factor
    - Least common multiple
- Decimals
  - Addition and subtraction
  - Multiplication and division
- Fractions
  - Fraction-decimal conversions
  - Comparing and ordering fractions and decimals
  - Multiplying and dividing fractions and mixed numbers

The Number System: Rational Numbers
4 Weeks
- Rational Numbers
  - Positive and negative numbers
  - Comparing and ordering integers
  - Rational number on the number line and coordinate axes
  - Compare and order rational numbers
  - Absolute value
  - Compare and order absolute value
  - Ordered pairs and distance on the coordinate plane

Quarter II

Ratios and Proportional Relationships
10 weeks
- Ratio and Proportions
  - Unit rate
  - Units of measure
    - Measurement conversions
  - Percents
    - Percent-decimal-fraction conversions

Quarter III

Expressions and Equations
11 weeks
- Expressions
  - Read, write and evaluate
  - Variables
  - Exponents
  - Equivalency
- Equations and Inequalities
  - One step equations
  - Inequalities
- Variable Relationships

Quarter IV

Geometry
6 weeks
- Area
  - Triangles

Data & Statistics
7 weeks
- Statistical Variability
  - Measures of central tendency

- - Quadrilaterals
    - Polygons
- Surface Area
- Volumes

- - Factors and multiples
    - Median
    - Mean
    - Mean absolute deviation
    - Overall pattern
- Data Displays and Distribution
  - Dot plots
  - Box plots
  - Histograms

Grade 7: Scope and Sequence

Quarter I

Unit name: Rational Numbers
Unit timeline: 6 weeks
Topics
- Absolute Value and Inverses
- Adding and Subtracting Integers and Rational Numbers
- Distance between Two Numbers on a Number Line.
- Multiplying and Dividing Integers and Rational Numbers.
- Repeating and Terminating Decimals
- Fractions, Decimals and Percents

Unit name: Ratios & Proportions
Unit timeline: 6 weeks
Topics
- Equivalent Ratios
- Unit Rates with Integers and Fractions
- Ratios with Rational Numbers
- Proportional Relationships through Tables, Graphs, Constant of Proportionality and Equation (y=mx)
- Maps and Scale Drawings

Quarter II

Unit name: Expressions, Equations, and Inequalities
Unit timeline: 8 weeks
Topics
- Expanding Algebraic Expressions (Distribute)
- Factoring
- Combining Like Terms
- One Step Equations (percent equation)
- Writing and Solving Two Step Equations
- Simple Interest

- Compound Interest
- Percent Increase and DecreasMarkup and Markdown
- Writing and solving one step inequalities
- Writing and solving two step inequalities
- Solving Multi-step Inequalities
- Supplementary, Complementary, Adjacent and Vertical Angles
- Circumference and Area of a Circle
- Area and Perimeter

Quarter III

Unit name: Percents and Proportional Relationships
Unit timeline: 4 Weeks
Topics
- Percents greater than 100 and less than 1
- Complex Fractions
- Percent Equation
- Markups and Markdowns
- Percent Error
- Tax, Tip, and Commission

Unit name: Probability and Statistics
Unit timeline: 8 weeks
Topics
- Likelihood and Probability
- Sample Space
- Relative Frequency and Experimental Probability
- Theoretical Probability
- Probability Models
- Compound Events
- Sample Spaces

- Counting Outcomes
- Finding Theoretical Probabilities
- Conducting a Survey
- Random Samples and Survey
- Finding Mean, Median, and Mode
- Displaying Frequencies
- Stem and Leaf Plots
- Box and Whisker Plots

Quarter IV

Unit name: Geometry
Unit timeline:8 weeks
Topics
- Complementary and Supplementary Angles
- Adjacent and Vertical Angles Center, Radius and Diameter
- Circumference

- Surface Area and Volume
- Geometry Drawing Tools
- Drawing Triangles with Given Conditions
- 2-D Slices of Right Rectangular Prisms
- 2-D Slices of Right Rectangular Pyramids
- Surface Areas of Right Prisms
- Volumes of Right Prisms

● Area of a Circle	● Surface Areas of Right Pyramids

Grade 8: Scope and Sequence

Quarter I

Unit name: Rational & Irrational Number Sense Unit timeline: 25 Days Topics ● Irrational Numbers (a/s) ● Square & Cube Roots (M) ● Approximate Irrational Square Roots (a/s) ● Properties of Exponents (M) ● Answers in Radical Form (M) ● Scientific Notation (exponent patterns)(M)	Unit name: Solving Linear Equations & Inequalities Unit timeline: 20 Days Topics ● Solve Linear Equations(1 variable) w/rational number coefficients ● Write linear equations from word problems with initial values and rates of change. ● Solve Linear Equations(1 variable) requiring expanding expressions & Distributive property ● Identify Equations with One Solution, No Solution & Infinite Solutions. ● Linear Inequalities

Quarter II

Unit name: Geometry-Congruence & Similarity Unit timeline: 30 days Topics ● Types of Symmetry ● Visual Transformations (4 kinds) ● Coordinate Transformations (4 kinds) ● Congruence vs Similarity ● Parallel Lines cut by Transversal ● Angle Sum & Exterior Angles of Triangles ● Similar Triangles (angle-angle criterion) ● Proof of Pythagorean Theorem & Converse ● Pythagorean Theorem and Side Length (2D/3D) ● Pythagorean Theorem and Distance ● Pythagorean Triples	Unit name: Functions Intro Unit timeline: 15 days Topics ● Define & Differentiate between Relation & Function ● Compare Functions in Various Representations (Linear v. Non-Linear, Graph, Table, Equation) ● Relate Linear Functions to problems in context.

Quarter III

Unit name: Functions & Linear Relationships Unit timeline: 30 days Topics ● Interpret Constant of Proportionality as unit rate, rate of change or slope in linear functions represented in tables and descriptions.	Unit name: Systems of Equations Unit timeline: 25 days Topics ● Solve Systems of Equations Graphically

● Use similar triangles as explanation for constant slope between any two points on graph of line. (Slope Triangle) ● Analyze & Interpret Initial Value for linear functions in y = mx + b form. (Y-Intercept) ● Derive equations y = mx and y = mx + b from graphs, tables, and descriptions. ● Relate linear equations to problems in context ● Describe, Analyze & Sketch Graphs of Linear Relationships ● Construct & Interpret Scatter Plots for situations that suggest a linear relationship. ● Informally create a line of best fit and approximate a linear equation.	● Parallel and Perpendicular Lines (graph/equation) ● One, None & Infinite Solutions (graph/equation) ● Solve Systems of Equations Algebraically ● Substitution Method ● Elimination Method (Addition or Subtraction)

Quarter IV	
Unit name: Geometry-Volume **Unit timeline: 15 days** Topics ● Volume of Cones, Cylinders, and Spheres ● Relationship between volume of Cones & Cylinders ● Solve problems involving volume of cones, cylinders and spheres.	**Unit name: Data Analysis** **Unit timeline: 20 days** Topics ● Construct & Interpret Scatter Plots for Bivariate Data ● Describe patterns of Data (Clustering, Outliers, Pos/Neg Association, Non-linear Association) ● Use Equations, Scatter Plots, and Frequency Tables to Model Real World Relationships. ● Construct Frequency & Relative Frequency Tables for Bivariate Data ● Analyze and Describe Associations within Bivariate Data

Algebra 1: Scope and Sequence

Quarter I

Unit name: Linear Equations and Inequalities
Unit timeline: 4 weeks

Topics
- Variables and Expressions
- Order of Operations
- Properties of Numbers
- Solving Multi-Step Equations
- Solving Equations With Variables on Both Sides
- Literal Equations and Formulas
- Solving Multi-Step Inequalities
- Compound Inequalities
- Absolute Value Equations and Inequalities
- Unions and Intersections of Sets

Unit name: Relations and Functions
Unit timeline: 3 weeks

Topics
- Patterns & Nonlinear Functions
- Graphing a Function Rule
- Writing a Function Rule
- Domain and Range
- Determine relation/function
- Rate of change
- Graph functions with graphing calculator

Quarter II

Unit name: Systems of Linear Equations
Unit timeline: 4 weeks

Topics
- Graphing systems
- Solve systems using substitution
- Solve systems using elimination
- Modeling with linear inequalities
- Systems of linear inequalities
- Piecewise and step functions

Unit name: Intro to Polynomials and Factoring
Unit timeline: 5 weeks

Topics
- Classify, add, and subtract polynomials
- Multiplying and Factoring
- Multiplying Binomials/Polynomials
- Multiplying Special Cases
- Factoring by grouping
- Factoring $x^2 + bx + c$
- Factoring $ax^2 + bx + c$
- Factoring special cases

Quarter III

Unit name: Quadratic Functions and Equations
Unit timeline: 5 weeks

Topics
- Quadratic Graphs and Their Properties
- Quadratic Functions
- Solving Quadratic Equations by Graphing
- Solving Quadratic Equations by factoring
- Completing the Square
- The Quadratic Formula and the Discriminant

Unit name: Exponents and Exponential Functions
Unit timeline: 4 weeks

Topics
- Zero and Negative Exponents
- Multiplying Powers With the Same Base
- Division Properties of Exponents
- Rational Exponents and Radicals
- Exponential Functions
- Exponential Growth and Decay
- Geometric Sequences

Quarter IV

Unit name: Radical Expressions and Equations Unit timeline: 5 weeks	Unit name: Statistics and Probability Unit timeline: 5 weeks
Topics • Simplifying Rational Expressions • Multiplying and Dividing Rational Expressions • The Pythagorean Theorem • Simplifying Radicals • Operations with Radical Expressions • Solving Radical Equations • Trigonometric Ratios	Topics • Frequency tables and histograms • Mean, median, mode, and range • Box-and-whisker plots • Percentiles • Analyse samples and surveys • Scatter plots • Standard deviation