

## Math Curriculum

**NOTE:**

- Oakview Preparatory School Grade 8 Mathematics Curriculum is a **union** of both the North America Division Mathematics Curriculum, and the New York State Mathematics Curriculum.
- There will be an **integration of faith and learning** as per SDA beliefs
- Each chapter includes at least one project.
- **Summative final grades** are based on select assignments (homework, class work, projects, essays, etc.)
- **Exams** are tentatively scheduled for the dates indicated on class curriculums.
- **Peer** groups will be set up in classes to foster better learning of math concepts and skills.
- **Students** will be required to produce a portfolio of specific assignments
- **Students** will be required to use the internet and online resources to complete some assignments and quizzes.
- **Students will be required to produce work on time** – late work will be penalized 5 % for each day late unless there is a valid written excuse by the parent or a doctor.
- Students will be required to produce work that is neat and of a high standard.  
As much as possible the school’s website (www.oakviewprep.com), and e-mail communication will be used to keep parents up-to-date on topics being covered and student’s progress.

### Mathematics Curriculum/Long Range Plans: 2018/2019 - Grade 5

Month	Chapter	Sections and Common Core Standards	Objective
September	Chapter 1: Place Value, Multiplication, and Expressions	Chapter Opener	Review of previous content
		1.1 – Place Value and Patterns: CC.5.NBT.1	1.1 – Recognize the 10 to 1 relationship among place value positions
		1.2 – Place Value and Whole Numbers: CC.5.NBT.1	1.2 – Read and write whole numbers through hundred millions
		1.3 – Properties: CC.5.NBT.6	1.3 – Use properties of to solve problems
		1.4 – Powers of 10 and Exponents: CC.5.NBT.2	1.4 – Write and evaluate repeated factors in exponent form
		1.5 – Multiplication Patterns: CC.5.NBT.2	1.5 – Use the basic fact and a pattern to multiply mentally by multiples of 10, 100, and 1,000
		1.6 – Multiply by 1-Digit Numbers: CC.5.NBT.5	1.6 – Multiply by 1-digit numbers
		Mid-Chapter Review	
		1.7 – Multiply by 2-Digit Numbers: CC.5.NBT.5	1.7 – Multiply by 2-digit numbers

		1.8 – Relate Multiplication to division: CC.5.NBT.6	1.8 – Use multiplication to solve division problems
		1.9 – Problem Solving-Multiplication and division: CC.5.NBT.6	1.9 – Use the strategy <i>solve a simpler problem</i> to solve problems
		1.10 – Numerical Expressions: CC.5.OA.2	1.10 – Write numerical expressions
		1.11 – Evaluate Numerical Expressions: CC.5.OA.1	1.11 – Use order of operations to evaluate numerical expressions
		1.12 – Grouping Symbols: CC.5.OA.1	1.12 – Evaluate numerical expressions with parenthesis, brackets, and braces
		<b>Chapter 1 Review/textbook test</b>	<b>Completed in class</b>
		<b>Chapter 1 test</b>	
October	Chapter 2: Divide Whole Numbers	<b>Chapter Opener</b>	<b>Review of previous content (Home)</b>
		2.1 – Place the First Digit: CC.5.NBT.6	2.1 – Place the first digit in the quotient by estimating or using place value
		2.2 – Divide by 1-Digit Divisors: CC.5.NBT.6	2.2 – Divide 3- and 4-digit dividends by 1-digit divisors
		2.3 – Division with 2-Digit Divisors: CC.5.NBT.6	2.3 – Model division with 2-digit divisors using base-ten blocks
		2.4 – Partial Quotients: CC.5.NBT.6	2.4 – Use quotients to divide by 2-digit divisors
		2.5 – Estimate with 2-Digit Divisors: CC.5.NBT.6	2.5 – Estimate quotients using compatible numbers
		<b>Mid-Chapter Review</b>	
		2.6 – Divide by 2-Digit Divisors: CC.5.NBT.6	2.6 – Divide by 2-digit divisors
		2.7 – Interpret the Remainder: CC.5.NF.3, CC.5.NBT.6	2.7 – Solve division problems and decide when to write a remainder as a fraction
		2.8 – Adjust Quotients: CC.5.NBT.6	2.8 – Adjust the quotients if the estimate is too high or too low
		2.9 – Problem Solving-Division: CC.5.NBT.6	2.9 – Solve problems by using the strategy <i>draw a diagram</i>
		<b>Chapter 2 Review/textbook test</b>	<b>Completed in class</b>
		<b>Chapter 2 Test</b>	
October	Chapter 3: Add and Subtract Decimals	<b>Chapter Opener</b>	<b>Review of previous content</b>
		3.1 – Investigate Thousandths: CC.5.NBT.1, CC.5.NBT.3a	3.1 – Model, read, and write decimals to thousandths
		3.2 – Place Value of Decimals: CC.5.NBT.3a, CC.5.NBT.1	3.2 – Read and write decimals through thousandths
		3.3 – Compare and Order Decimals: CC.5.NBT.3b	3.3 – Compare and order decimals to thousandths using place value
		3.4 – Round Decimals: CC.5.NBT.4	3.4 – Round decimal to any place

		3.5 – Investigate Decimal Addition: CC.5.NBT.7	3.5 – Model decimal addition using base-ten blocks
		3.6 – Investigate Decimal Subtraction: CC.5.NBT.7	3.6 – Model decimal subtraction using base-ten blocks
		<b>Mid-Chapter Review</b>	
		3.7 – Estimate Decimal Sums and Differences: CC.5.NBT.7	3.7 – Make reasonable estimates of decimal sums and differences
		3.8 – Add Decimals: CC.5.NBT.7	3.8 – Add decimals using place value
		3.9 – Subtract Decimals: CC.5.NBT.7	3.9 – Subtract decimals using place value
		3.10 – Algebra- Patterns with Decimals: CC.5.NBT.7	3.10 – Identify, describe, and create numeric patterns with decimals
		3.11 – Problem Solving- Add and Subtract Money: CC.5.NBT.7	3.11 – Solve problems using the strategy make a table
		3.12 – Choose a Method: CC.5.NBT.7	3.12 – Choose a method to find a decimal sum or difference
		<b>Chapter 3 Review/textbook test</b>	<b>Completed in class</b>
		<b>Chapter 3 Test</b>	
November	Chapter 4: Multiply Decimals	<b>Chapter Opener</b>	<b>Review of previous content</b>
		4.1 – Algebra- Multiplication Patterns with Decimals: CC.5.NBT.2, CC.5.NBT.7	4.1 – Find patterns in products when multiplying by powers of 10
		4.2 – Investigate- Multiply Decimals and Whole Numbers: CC.5.NBT.7	4.2 – Model multiplication of whole numbers and decimals
		4.3 – Multiplication with Decimals and Whole Numbers: CC.5.NBT.2, CC.5.NBT.7	4.3 – Multiply a decimal and a whole number using drawings and place value
		4.4 – Multiply Using Expanded Form: CC.5.NBT.2, CC.5.NBT.7	4.4 – Use expanded form and place value to multiply a decimal and a whole number
		<b>Mid-Chapter Review / Quiz</b>	
		4.5 – Problem Solving- Multiply Money: CC.5.NBT.7	4.5 – Solve problems using the strategy <i>draw a diagram</i> to multiply money
		4.6 – Investigate- Decimal Multiplication: CC.5.NBT.7	4.6 – Model multiplication by decimals
		4.7 – Multiply Decimals: CC.5.NBT.2, CC.5.NBT.7	4.7 – Place decimal point in decimal multiplication
		4.8 – Zeros in the Product: CC.5.NBT.2, CC.5.NBT.7	4.8 – Multiply decimals with zeros in the product
		<b>Chapter 4 Review/textbook test</b>	<b>Completed in class</b>
		<b>Chapter 4 Test</b>	

November	Chapter 5: Divide Decimals	<b>Chapter Opener</b>	<b>Review of previous content</b>
		5.1 – Algebra- Division Patterns with Decimals: CC.5.NBT.2	5.1 – Find patterns in quotients when dividing by powers of 10
		5.2 – Divide Decimals by Whole Numbers: CC.5.NBT.7	5.2 – Model division of decimals by whole numbers
		5.3 – Estimate Quotients: CC.5.NBT.7	5.3 – Estimate decimal quotients
		5.4 – Division of Decimals by Whole Numbers: CC.5.NBT.2, CC.5.NBT.7	5.4 – Divide decimals by whole numbers
		<b>Mid-Chapter Review</b>	
		5.5 – Investigate- Decimal Division: CC.5.NBT.7	5.5 – Model division by decimals
		5.6 – Divide Decimals: CC.5.NBT.2, CC.5.NBT.7	5.6 – Place the decimal point in decimal division
		5.7 – Write Zeros in the Dividend: CC.5.NBT.7, CC.5.NF.3	5.7 – Write a zero in the dividend to find a quotient
		5.8 - Problem Solving- Decimal Operations: CC.5.NBT.7	5.8 – Solve multi-step decimal problems using the strategy <i>work backward</i>
		<b>Chapter Review / textbook test</b>	<b>Completed in class/home</b>
		<b>Chapter 5 Test</b>	
		December	Chapter 6: Add and Subtract Fractions with Unlike Denominators
6.1 – Investigate- Addition with Unlike Denominators: CC.5.NF.1, CC.5.NF.2	6.1 – Use models to add fractions with unlike denominators		
6.2 – Investigate- Subtraction with Unlike Denominators: CC.5.NF.1, CC.5.NF.2	6.2 – Use models to subtract fractions with unlike denominators		
6.3 – Estimate Fraction Sums and Differences: CC.5.NF.2	6.3 – Make reasonable estimates of fraction sums and differences		
6.4 – Common Denominators and Equivalent fractions: CC.5.NF.1	6.4 – Find a common denominator or LCD to write equivalent fractions		
6.5 – Add and Subtract Fractions: CC.5.NF.1, CC.5.NF.2	6.5 – Use equivalent fractions to add and subtract fractions		
<b>Mid-Chapter Review</b>			
6.6 – Add and Subtract Mixed Numbers: CC.5.NF.1, CC.5.NF.2	6.6 – Add and subtract mixed numbers with unlike denominators		
6.7 – Subtraction with Renaming: CC.5.NF.1, CC.5.NF.2	6.7 – Rename to find the difference of two mixed numbers		
6.8 – Algebra- Patterns with Fractions: CC.5.NF.1	6.8 – Identify, describe, and create numeric patterns with fractions		
6.9 – Problem Solving- Practice Addition and Subtraction: CC.5.NF.1, CC.5.NF.2	6.9 – Solve problems using the strategy <i>work backward</i>		

		6.10 – Algebra- Use Properties of Addition: CC.5.NF.1	6.10 – Add fractions and mixed numbers with unlike denominators using the properties
		Chapter Review / Quiz	In class
		Chapter 6 Test	
January	Chapter 7: Multiply fractions	Chapter Opener	Review of previous content
		7.1 – Find Part of a Group: CC.5.NF.4a	7.1 – Model to find the fractional part of a group
		7.2 – Investigate- Multiply Fractions and Whole Numbers: CC.5.NF.4a	7.2 – Model the product of a fraction and a whole number
		7.3 – Fraction and Whole Number Multiplication: CC.5.NF.4a	7.3 – Multiply fractions and whole numbers
		7.4 – Investigate- Multiply Fractions: CC.5.NF.4b	7.4 – Multiply fractions using models
		7.5 – Compare fraction Factors and Products: CC.5.NF.5a, CC.5.NF.5b	7.5 – Relate the size of the product compared to the size of one factor when multiplying fractions
		Mid-Chapter Review	
		7.6 – Fraction Multiplication: CC.5.NF.4a, CC.5.NF.5a, CC.5.NF.5b	7.6 – Multiply Fractions
		7.7 – Investigate- Area and Mixed Numbers: CC.5.NF.4b	7.7 – Use a model to multiply two mixed numbers and find the area of a rectangle
		7.8 – Compare Mixed Number Factors and Products: CC.5.NF.5a, CC.5.NF.5b	7.8 – Relate the size of the product to the factors when multiplying fractions greater than one
		7.9 – Multiply Mixed Numbers: CC.5.NF.6	7.9 – Multiply Mixed Numbers
		7.10 – Problem Solving- Find Unknown Lengths: CC.5.NF.5b, CC.5.NF.6	7.10 – Solve problems using the strategy <i>guess, check, and revise</i>
		Chapter Review / Quiz	In Class
		Chapter 7 Test	
		February	Chapter 8: Divide Fractions
8.1 – Investigate- Divide Fractions and Whole Numbers: CC.5.NF.7a/b/c	8.1 – Divide a whole number by a fraction and divide a fraction by a whole number		
8.2 – Problem Solving- Use Multiplication: CC.5.NF.7b	8.2 – Solve problems using the strategy <i>draw a diagram</i>		
8.3 – Connect Fractions to Division: CC.5.NF.3	8.3 – Interpret a fraction as division and solve whole-number division problems that result in a fraction or mixed number		
Mid-Chapter Review/Quiz			
8.4 – Fraction and Whole-Number Division: CC.5.NF.7a/b/c	8.4 – Divide a whole number by a fraction and divide a fraction by a whole number		
8.5 – Interpret Division with Fractions: CC.5.NF.7a/b/c	8.5 – Represent division by drawing diagrams and writing story problems and equations		
Chapter Review / Quiz	Text book in Class		

		<b>Chapter 8 Test</b>	
February	Chapter 9: Algebra-Patterns and Graphing	<b>Chapter Opener</b>	<b>Review of previous content (Home Work)</b>
		9.1 – Line Plots: CC.5.MD.2, CC.5.OA.1, CC.5.NF.7a	9.1 – Make and Use line Plots with fractions to solve problems
		9.2 – Ordered Pairs: CC.5.G.1	9.2 – Graph and name points on a coordinate grid using ordered pairs
		9.3 – Investigate- Graph Data: CC.5.G.2	9.3 – Collect and graph data on a coordinate grid
		9.4 – Line Graphs: CC.5.G.2	9.4 – Analyze and display data in a line graph
		<b>Mid-Chapter Review/Quiz</b>	
		9.5 – Numerical Patterns: CC.5.OA.3	9.5 – Use two rules to generate a numerical pattern and identify the relationship between the corresponding terms in the patterns
		9.6 – Problem Solving-Find a Rule: CC.5.OA.3	9.6 – Solve Problems using the strategy <i>solve a simpler problem</i>
		9.7 – Graph and analyze Relationships: CC.5.OA.3, CC.5.G.2	9.7 – Graph the relationship between two numerical patterns on a coordinate grid
		<b>Chapter Review / Quiz</b>	<b>Text book in class</b>
March	Chapter 10: Convert Units of Measure	<b>Chapter Opener</b>	<b>Review of previous content (Home Work)</b>
		10.1 – Customary Length: CC.5.MD.1	10.1 – Compare, contrast, and convert customary units of length
		10.2 – Customary Capacity: CC.5.MD.1	10.2 - Compare, contrast, and convert customary units of capacity
		10.3 – Weight: CC.5.MD.1	10.3 - Compare, contrast, and convert customary units of weight
		10.4 – Multi-step Measurement Problems: CC.5.MD.1	10.4 – Convert measurement units to solve multi-step problems
		<b>Mid-Chapter Review/Quiz</b>	
		10.5 – Metric Measures: CC.5.MD.1	10.5 - Compare, contrast, and convert metric units
		10.6 – Problem Solving – Customary and Metric Conversions: CC.5.MD.1	10.6 – Solve problems about customary and metric conversions using the strategy <i>make a table</i>
		10.7 – Elapsed Time: CC.5.MD.1	10.7 – Convert units of time to solve elapsed time problems
		<b>Chapter Review / Quiz</b>	<b>Text book in class</b>
		<b>Chapter 10 Test</b>	<b>Online test/ Take home</b>
March	Chapter 11: Geometry and Volume	<b>Chapter Opener</b>	<b>Review of previous content</b>
		11.1 – Polygons: CC.5.G.3	11.1 – Identify and classify polygons
		11.2 – Triangles: CC.5.G.3, CC.5.G.4	11.2 – Classify and draw triangles using their properties

		11.3 – Quadrilaterals: CC.5.G.4	11.3 – Classify and draw quadrilaterals using their properties
		11.4 – Problem Solving- Properties of Two-dimensional Figures: CC.5.G.3	11.4 – Solve problems using the strategy <i>act it out</i>
		11.5 – Three Dimensional Figures: CC.5.MD.3, CC.5.G.4	11.5 – Identify, describe, and classify three dimensional figures
		11.6 – Investigate- Unit cubes and Solid Figures: CC.5.MD.3a	11.6 – Understand unit cubes and how they can be used to build a solid figure.
		<b>Mid-Chapter Review</b>	
		11.7 – Investigate- Understand Volume: CC.5.MD.3b, CC.5.MD.4	11.7 – Count unit cubes that fill a solid figure to find volume
		11.8 – Investigate- Estimate Volume: CC.5.MD.4, CC.5.MD.3b	11.8 – Estimate the volume of a rectangular prism
		11.9 – Volume of Rectangular Prisms: CC.5.MD.5a	11.9 – Find the volume of rectangular prisms
		11.10 – Algebra- Apply Volume Formulas: CC.5.MD.5b	11.10 – Use a formula to find the volume of a rectangular prism
		11.11 – Problem Solving- Compare Volumes: CC.5.MD.5b	11.11 – Use the strategy <i>make a table</i> to compare volumes
		11.12 – Find the Volume of Composed Figures	11.12 – Find the volume of combined rectangular prisms
		<b>Chapter 11 Review/textbook test</b>	<b>Completed in class</b>
		<b>Chapter 11 Test</b>	
April	Curriculum Review	Test prep practice and review for New York State Math Assessment	
May	ITBS	Union wide ITBS testing	
May	NYS Testing	Math state test based on Common Core curriculum	
May	Fractions	Comparing and ordering fractions and decimals	Text – Standards practice book
May	Factor trees, modeling percents, relating decimals and percents, fractions decimals and percents	Find prime factorization using a factor tree. Convert between fractions, decimals and fractions.	Text – Standards practice book
May	Divide fractions by a whole number	Divide a fraction by a whole number	Text – Standards practice book
May	Ratios, Rates and Understanding Integers	Understand and use rates and ratios. Understand the concept of integers and represent them on a number line.	Text – Standards practice book

May	Algebra - Write and evaluate expressions and understand inequalities	Write and evaluate expressions and understand inequalities and use them to solve problems	Text – Standards practice book
May	Polygons on Coordinate Grid, area of parallelogram, median, mode, and average	Draw polygons on coordinate grid; find area of parallelogram; find median, mode, and average.	Text – Standards practice book
May	Histograms	Histograms – use histograms to organize data and analyze them	Text – Standards practice book
June	Review for Finals		
June	Finals	Test – Topics covered in May	

**Topics:** These will be covered in conjunction with modules on [www.EngageNY.org](http://www.EngageNY.org) Assignments will be given from site along with question palette for the week

**Ready New York:** Lesson to be assigned weekly and completed on loose leaf.

**Project:** 20%.

**Quizzes:** Weekly (most times).

**Test Prep:** Practice assignments will be given at the end of each chapter.

**Students will be required to produce work on time:** Late work will be penalized 5 % for each day late unless there is a valid written excuse by the parent or a doctor.

**Makeup:** If makeups are given the maximum possible score will be 70%