CRITICAL AREA- The Number System

Pre-requisite Skills Inventory: Administer week 1

Essential Question – How do you solve real-world problems involving whole numbers and decimals?

CHAPTER 1- Whole Numbers and Decimals	Lesson	CCSS	Timeline (12 days)
Introduction of Chapter	Assessing Prior Knowledge		1 day
Divide Multi-Digit Numbers	Lesson 1.1 - Fluently divide multi-digit numbers.	6NS.B.2	1 day
Prime Factorization	Lesson 1.2 – Write the prime Factorization of Numbers	6.NS.B.4	1 day
Least Common Multiple	Lesson 1.3 – Find the least common multiple of two whole numbers.	6.NS.B.4	1 day
Greatest Common Factor	Lesson 1.4 – Find the greatest common factor of two whole numbers.	6.NS.B.4	1 day
Problem Solving – Apply the greatest common factor.	Lesson 1.5 – Solve problems involving greatest common factor.	6.NS.B.4	1 day
Add and subtract decimals	Lesson 1.6 Fluently add and subtract multi-digit decimals	6.NS.B.3	1 day
Multiplying decimals	Lesson 1.7 Fluently multiply multi-digit numbers	6.NS.B.3	1 day
Divide decimals by whole numbers	Lesson 1.8 Fluently divide decimals by whole numbers.	6.NS.B.3	1 day
Divide by decimals	Lesson 1.9 Fluently divide whole numbers and decimals by decimals	6.NS.B.3	1 day
Review			1 day
Test and Introduce Chapter 2			1 day
Getting Ready for the PARCC, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review

CRITICAL AREA- The Number System
Completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers

Essential Question – How can you use the relationship between multiplication and division to divide fractions?

CHAPTER 2- Fractions	Lesson	CCSS	Timeline (14 days)
Fractions and Decimals	Lesson 2.1 Convert between fractions and decimals	6.NS.C.6.c	1 day
Compare and Order Fractions and Decimals	Lesson 2.2 Compare and order fractions and decimals	6.NS.C.7a	1 day
Multiply Fractions	Lesson 2.3 Multiply fractions	6.NS.B.4	1 day
Simplify Factors	Lesson 2.4 Simplify fractional factors by using the greatest common factor	6.NS.B.4	1 day
Investigate – Model Fraction Division	Lesson 2.5 Use a model to show division of fractions	6.NS.A.1	1 day
Estimate Quotients	Lesson 2.6 Use compatible numbers to estimate quotients of fractions and mixed numbers	6.NS.A.1	1 day
Divide Fractions	Lesson 2.7 Divide Fractions	6.NS.A.1	1 day
Investigate- Model Mixed Number Division	Lesson 2.8 Use a model to show division of mixed numbers	6NS.A.1	2 days
Divide Mixed Numbers	Lesson 2.9 Divide Mixed Numbers	6.NS.A.1	1 day
Problem Solving- Fractional Operations	Lesson 2.10 Solve problems with fractions and mixed numbers by applying the strategy use a model	6.NS.A.1	2 days
Review			1 day
Test and Introduce Chapter 3			1 day
Getting Ready for the PARCC, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review

CRITICAL AREA- The Number System **Completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers**			
Essential Question – How do you write, interpret, and use rational numbers?			
CHAPTER 3- Rational Numbers	**Lesson**	**CCSS**	**Timeline** (13-14 days)
Understand positive and negative integers	Lesson 3.1 Understand positive and negative numbers, and use them to represent real world quantities.	6.NS.C.5 6.NS.C.6a	1 day
Compare and order negative integers	Lesson 3.2 Compare and order integers	6.NS.C.7a 6.NS.C.7b	1 day
Rational numbers and the number line	Lesson 3.3 Plot rational numbers on a number line, and use a number line to identify opposites	6.NS.C.6a 6.NS.C.6c	1 day
Compare and order rational numbers	Lesson 3.4 Compare and order rational numbers	6.NS.C.7a 6.NS.C.7b	1 day
Absolute value	Lesson 3.5 Find and interpret the absolute value of rational numbers.	6.NS.C.7c	1 day
Compare absolute values	Lesson 3.6 Interpret comparisons involving absolute values	6.NS.C.7d	1 day
Rational numbers and the coordinate plane	Lesson 3.7 Ordered pairs relationships	6.NS.C.6c	1 day
Ordered pairs relationships	Lesson 3.8 Identify the relationship between points on a coordinate plane.	6.NS.C.6b	1 day
Distance on a coordinate plane	Lesson 3.9 Find horizontal and vertical distance on the coordinate plane.	6.NS.C.8	1 day
Problem solving- The coordinate plane	Lesson 3.10 Solve problems on the coordinate plane by using the strategy – *draw a diagram*	6.NS.C.8	1 – 2 days
Review			1 day
Test and Introduce Chapter 4			1 day
Getting Ready for the Parcc, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review
Critical Area Performance Task *retain for records			1 day

CRITICAL AREA- Rates and Ratios Connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems			
Essential Question – How can you use ratios to express relationships and solve problems?			
CHAPTER 4- Ratios and Rates	**Lesson**	**CCSS**	**Timeline** (12 days)
Investigate- Model Ratios	Lesson 4.1 Model ratios	6RP.A.1	2 days
Ratios and Rates	Lesson 4.2 Write ratios and rates	6RP.A.1	1 day
Equivalent Ratios and Multiplication Tables	Lesson 4.3 Use multiplication table to find equivalent ratios	6.RP.A.3a	1 day
Problem Solving- Use Tables to Compare Ratios	Lesson 4.4 Solve problems involving ratios by using the strategy find a pattern	6.RP.A.3a	1-2 days
Algebra- Use Equivalent Ratios	Lesson 4.5 Use tables to solve problems involving equivalent ratios	6.RP.A.3a	1 day
Find Unit Rates	Lesson 4.6 Use unit rates to make comparisons	6.RP.A.2	1 day
Algebra- Use Unit Rates	Lesson 4.7 Solve problems using unit rates	6.RP.A.3b	1 day
Algebra- Equivalent Ratios and Graphs	Lesson 4.8 Use a graph to represent equivalent ratios	6.RP.A.3a	1 day
Review			1 day
Test			1 day
Getting Ready for the PARCC, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review

CRITICAL AREA- Rates and Ratios Connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems			
Essential Question – How can you use ratio reasoning to solve percent problems?			
CHAPTER 5- Percents	**Lesson**	**CCSS**	**Timeline** (8 days)
Investigate Model percent's	Lesson 5.1 Use a model to show a percent as a rate	6. RP.A.3c	1 day
Write percents as fractions and decimals	Lesson 5.2 Write percents as fractions and decimals	6. RP.A.3c	1 day
Write fractions and decimals as percents	Lesson 5.3 Write fractions and decimals as percents	6. RP.A.3c	1 day
Percent of a quantity	Lesson 5.4 Find the percent of a quantity	6. RP.A.3c	1 day
Problem solving - Percents	Lesson 5.5 Solve percent problems by applying the strategy *use a model*	6. RP.A.3c	1 day
Find the whole from a percent	Lesson 5.6 Find the whole given a part and the percent	6. RP.A.3c	1 day
Review			1 day
Test			1 day
Getting Ready for the Parcc, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review

CRITICAL AREA- Rates and Ratios Connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems			
Essential Question – How can you use measurements to help you describe and compare objects?			
CHAPTER 6- Units of Measure	**Lesson**	**CCSS**	**Timeline** (8 days)
Convert Units of Measure	Lesson 6.1 Use ratio reasoning to convert from one unit of length to another	6.RP.A.3d	1 day
Converts Units of Capacity	Lesson 6.2 Use ratio reasoning to convert from one unit of capacity to another	6.RP.A.3d	1 day
Convert Units of Weight and Mass	Lesson 6.3 Use ratio reasoning to convert from one unit of weight or mass to another	6.RP.A.3d	1 day
Transform Units	Lesson 6.4 Transform units to solve problems	6.RP.A.3d	1 day
Problem Solving- Distance, Rate, and Time Formulas	Lesson 6.5 Solve problems involving distance, rate, and time by applying the strategy use a formula	6.RP.A.3d	1 -2 day
Review			1 day
Test			1 day
Getting Ready for the Parcc, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review
Critical Area Performance Task *retain for records			1 day

CRITICAL AREA- Expressions and Equations Writing, interpreting, and using expressions and equations			
Essential Question – How do you write, interpret, and use algebraic expressions?			
CHAPTER 7- Algebra: Expressions	**Lesson**	**CCSS**	**Timeline** (8 days)
Exponents	Lesson 7.1 Write and evaluate expressions involving exponents.	6.EE.A.1	1 day
Evaluate expressions involving exponents	Lesson 7.2 Use the order of operations to evaluate expressions involving exponents	6.EE.A.1	1 day
Write algebraic expressions	Lesson 7.3 Write algebraic expressions	6.EE.A.2a	1 day
Identify parts of expressions	Lesson 7.4 Identify and describe parts of expressions.	6.EE.A.2b	1 day
Evaluate algebraic expressions and formulas	Lesson 7.5 Evaluate algebraic expressions and formula.	6.EE.A.2c	1 day
Use algebraic expressions	Lesson 7.6 Use algebraic expressions to solve problems.	6.EE.B.6	1 day
Review			1 day
Test			1 day
Getting Ready for the Parcc, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review

CRITICAL AREA- Expressions and Equations Writing, interpreting, and using expressions and equations			
Essential Question – How can you use equations and inequalities to represent situations and solve problems?			
CHAPTER 8- Algebra: Equations and Inequalities	**Lesson**	**CCSS**	**Timeline** (12-15 days)
Solutions of Equations	Lesson 8.1 determine whether a number is a solution to an equation	6.EE.B.5	1 day
Write Equations	Lesson 8.2 translate between words and equations	6.EE.B.7	1 day
Investigate- Model and Solve Equations	Lesson 8.3 use models to solve addition equations	6.EE.B.7	1-2 days
Solve Addition and Subtraction Equations	Lesson 8.4 use algebra to solve addition and subtraction equations	6EE.B.7	1 day
Investigate- Model and Solve Multiplication Equations	Lesson 8.5 use models to solve multiplication equations	6.EE.B.7	1-2 days
Solve Multiplication and Division Equations	Lesson 8.6 use algebra to solve multiplication and division equations	6.EE.B.7	1 day
Problem Solving- Equations with Fractions	Lesson 8.7 solve equations involving fractions by using the strategy solve a simpler problem	6.EE.B.7	1-2 days
Solutions of Inequalities	Lesson 8.8 determine whether a number is a solution of an inequality	6.EE.B.5	1 day
Write Inequalities	Lesson 8.9 write algebraic inequalities	6.EE.B.8	1 day
Graph Inequalities	Lesson 8.10 represent solutions of algebraic inequalities on a number line	6.EE.B.8	1 day
Review			1 day
Test			1 day
Getting Ready for the Parcc, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review

CRITICAL AREA- Expressions and Equations Writing, interpreting, and using expressions and equations			
Essential Question – How can you show relationships between variables?			
CHAPTER 9- Algebra: Relationships Between Variables	**Lesson**	**CCSS**	**Timeline** (8 days)
Independent and dependent events	Lesson 9.1 Write an equation to represent the relationship between an independent variable and a dependent variable.	6.EE.C.9	1 day
Equations and tables	Lesson 9.2 Translate between equations and tables.	6.EE.C.9	1 day
Problem solving – Analyze relationships	Lesson 9.3 Solve problems involving relationships between quantities by using the strategy- *find a pattern.*	6.EE.C.9	1-2 days
Graph relationships	Lesson 9.4 Graph the relationship between two quantities.	6.EE.C.9	1 day
Equations and graphs	Lesson 9.5 Translate between equations and graphs.	6.EE.C.9	1 day
Review			1 day
Test			1 day
Getting Ready for the Parcc, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review
Critical Area Performance Task *retain for records			1 day

CRITICAL AREA- Geometry and Statistics Developing understanding of statistical thinking. Solve real-world and mathematical problems involving area, surface area, and volume.			
Essential Question – How can you use measurements to describe two-dimensional figures?			
CHAPTER 10- Area	**Lesson**	**CCSS**	**Timeline** (12-14 days)
Algebra- Area of Parallelograms	Lesson 10.1 find the area of parallelograms	6.G.A.1 6, 6.EE.A.2c, 6.EE.B.7	1 day
Investigate- Explore the Area of Triangles	Lesson 10.2 investigate the relationship among the areas of triangles, rectangles, and parallelograms	6.G.A.1	1 day
Algebra- Area of Triangles	Lesson 10.3 find the area of triangles	6.G.A.1, 6.EE.A.2c	1 day
Investigate- Explore Area of Trapezoids	Lesson 10.4 investigate the relationship between the areas of trapezoids and parallelograms	6.G.A.1	1-2 days
Algebra- Area of Trapezoids	Lesson 10.5 find the area of trapezoids	6.G.A.1, 6.EE.A.2c	1 day
Area of Regular Polygons	Lesson 10.6 find the area of regular polygons	6.G.A.1, 6.EE.A.2c	1 day
Composite Figures	Lesson 10.7 find the area of composite figures	6.G.A.1, 6.EE.A.2c	1 day
Problem Solving- Changing Dimensions	Lesson 10.8 determine the effect of changing the dimensions on the area of a polygon by using the strategy find a pattern	6.G.A.1	1-2 days
Figures on a Coordinate Plane	Lesson 10.9 plot polygons on a coordinate plane, and use coordinates to find side lengths	6.G.A.3, 6.NS.C.8	1-2 days
Review			1 day
Test			1 day
Getting Ready for the Parcc, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review

CRITICAL AREA- Geometry and Statistics Developing understanding of statistical thinking. Solve real-world and mathematical problems involving area, surface area, and volume.			
Essential Question – How can you use measurements to describe three-dimensional figures?			
CHAPTER 11- Surface Area and Volume	**Lesson**	**CCSS**	**Timeline** (10-12 days)
Three – dimensional figures and nets	Lesson 11.1 Use nets to represent three-dimensional figures	6.G.A.4	1 -2 days
Investigate – Explore surface area using nets	Lesson 11.2 Use nets to recognize that the surface area of a prism is equal to the sum of the areas of its faces.	6.G.A.4	1 day
Algebra – Surface area of prisms	Lesson 11.3 Find the surface area of prisms	6.G.A.4 6.G.A.2c	1 day
Algebra – Surface area of pyramid	Lesson 11.4 Find the surface area of pyramids	6.G.A.4 6.G.A.2c	1 day
Investigate – Fractions and volume	Lesson 11.5 Investigate the volume of rectangular prisms with fractional edge lengths.	6.G.A.2	1 day
Algebra – Volume of rectangular prisms	Lesson 11.6 Use formulas to find the volume of rectangular prisms with fractional edge lengths.	6.G.A.2 6.G.A.2c	1 day
Problem solving – Geometric measurements	Lesson 11.7 Solve problems involving area, surface area, and volume by applying the strategy – *use a formula*	6.G.A.4 6.G.A.2 6.G.A.1	1 – 2 day
Review			1 day
Test			1 day
Getting Ready for the Parcc, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review

CRITICAL AREA- Geometry and Statistics Developing understanding of statistical thinking. Solve real-world and mathematical problems involving area, surface area, and volume.			
Essential Question – How can you display data and analyze measures of center?			
CHAPTER 12- Data Displays and Measures of Center	**Lesson**	**CCSS**	**Timeline** (10 days)
Recognize Statistical Questions	Lesson 12.1 Recognize statistical questions	6.SP.A.1	1 day
Describe Data Collection	Lesson 12.2 Describe a data set by stating what quantity was measured and how it was measured	6.SP.B.5a, 6SP.B.5b	1 day
Dot Plots and Frequency Tables	Lesson 12.3 Use frequency tables and dot plots to organize data	6.SP.B.4	1 day
Histograms	Lesson 12.4 display data in histograms	6.SP.B.4	1 day
Investigate- Mean as Fair Share and Balance Point	Lesson 12.5 understand the mean as fair share and as a balance point	6.SP.B.5c	1 day
Measures of Center	Lesson 12.6 summarize a data set by using mean, median, and mode	6.SP.B.5c	1 day
Effects of Outliers	Lesson 12.7 determine the effects of outliers on the measure of center	6.SP.B.5d	1 day
Problem Solving- Data Displays	Lesson 12-8 solve problems involving data by using the strategy draw a diagram	6.SP.B.4	1 day
Review			1 day
Test			1 day
Getting Ready for the Parcc, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review

CRITICAL AREA- Geometry and Statistics **Developing understanding of statistical thinking. Solve real-world and mathematical problems involving area, surface area, and volume.**			
CHAPTER 13- Variability and Data Distributions	**Lesson**	**CCSS**	**Timeline** (10-12 days)
Patterns in Data	Lesson 13.1 Dot plot, histogram	6.SP.B.5c	1 day
Box Plots	Lesson 13.2 Display data in box plots.	6.SP.B.4	1 day
Investigate – Mean absolute deviation	Lesson 13.3 Understand mean absolute deviation as a measure of variability from the mean.	6.SP.B.5c	1 -2 days
Measures of variability	Lesson 13.4 Summarize a data set by using range, interquartile range, and mean absolute deviation.	6.SP.B.5c	1 day
Choose appropriate measures of center and variability	Lesson 13.5 Choose appropriate measures of center and variability to describe data, and justify the choice.	6.SP.B.5d	1 day
Apply measures of center and variability	Lesson 13.6 Recognize what measures of center and variability indicate about a data set.	6.SP.A.3	1 day
Describe distributions	Lesson 13.7 Describe the distribution of the data set collected to answer a statistical question.	6.SP.A.2	1 day
Problem solving - Misleading statistics	Lesson 13.8 Use the strategy *work backward* to draw conclusions	6.SP.A.2	1 – 2 days
Review			1 day
Test			1 day
Getting Ready for the Parcc, Tier 1, 2, 3, Grab and Go (enrichment)			20 minute math review
Critical Area Performance Task *retain for records			1 day
District Benchmark: End of the Year Test- Administer by June 6, 2016 *retain for records			1 day

Lower Township Elementary Schools
Go Math Common Core State Standards
Topic/Lesson Pacing Chart
Grade 6