



Math Common Core Standards

KINDERGARTEN

COUNTING AND CARDINALITY		
STANDARD	SKILL	MASTERED
K.CC.1	Count to 100 by ones and tens	
K.CC.2	Count forward beginning from a given number within the known sequence instead of beginning at 1.	
K.CC.3	Write number from 0-20. Represent a number of objects with a written numeral.	
K.CC.4	Understand the relationship between numbers and quantities: connect counting to cardinality.	
K.CC.5	Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangle array or circle.	
K.CC.6	Identify whether the number of objects in one group is greater than, less than or equal to the number of objects in another group by using counting or matching strategies.	

OPERATIONS & ALGEBRAIC THINKING		
STANDARD	SKILL	MASTERED
K.O.A.1	Represent addition and subtraction with objects, fingers, mental images, acting it out, verbal explanations or expressions.	
K.O.A.2	Solve addition and subtraction word problems and add and subtract within 10 by using objects or drawing to represent a number.	
K.O.A.3	Decompose numbers less than or equal to 10 into pairs in more than one way, e.g. using objects or drawings and record each decomposition.	
K.O.A.4	For any number 1-9, find the number that makes 10 when added to the given number.	
K.O.A.5	Fluently add and subtract within 5.	

NUMBER & OPERATIONS IN BASE TEN		
STANDARD	SKILL	MASTERED
K.NBT.1	Compose and decompose numbers from 11-19 into ten ones and further ones.	

MEASUREMENT & DATA		
STANDARD	SKILL	MASTERED
K.MD.1	Describe measureable attributes of objects, such as length or weight.	
K.MD.2	Directly compare two objects with measureable attribute in common to see which object has more or less of the attribute.	
K.MD.3	Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	

GEOMETRY		
STANDARD	SKILL	MASTERED
K.G.1	Describe objects in the environment using names of shapes and describe the relative positions of these objects using terms such as above, below,	

	beside, in front of, behind and next to.	
K.G.2	Correctly name shapes regardless of their orientations or overall size.	
K.G.3	Identify shapes as two-dimensional (lying in a plane, “flat”) or three dimensional (solid)	
K.G.4	Analyze and compare two and three dimensional shapes in different sizes, orientation and describe similarities and differences between parts.	
K.G.5	Model shapes in the world by building shapes from components.	
K.G.6	Compose simple shapes to form larger shapes.	



FIRST GRADE

COUNTING AND CARDINALITY		
STANDARD	SKILL	MASTERED
1.OA.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart and comparing with unknowns in all positions.	
1.OA.2	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.	
1.OA.3	Apply properties of operations as strategies to add and subtract	
1.OA.4	Understand subtraction as an unknown addend problem	
1.OA.5	Relate counting to addition and subtraction (by counting on 2 to add 2)	
1.OA.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.	
1.OA.7	Understand the meaning of the equal sign and determine if equations involving addition and subtractions are true or false.	
1.OA.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. $8+?=11$	

NUMBER AND OPERATIONS IN BASE TEN		
STANDARD	SKILL	MASTERED
1.NBT.1	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	
1.NBT.2	Understand that the two digits of a two-digit number represent the amounts of tens and ones.	
1.NBT.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $<$, $=$.	
1.NBT.4	Add within 100, including adding a two digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings strategies based on place-value, properties of operations and the relationship between addition and subtraction.	
1.NBT.5	Given a two-digit number, mentally find 10 more and 10 less than that number in the range 10 -90.	
1.NBT.6	Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90.	

MEASUREMENT AND DATA		
STANDARD	SKILL	MASTERED
1M.D.1	Order three objects by length: compare the lengths of two objects indirectly by using the third object.	
1M.D.2	Express the length of an object as a whole number of length units by laying multiple copies of a shorter object end to end.	
1M.D.3	Tell and write time in hours and 1/2-hours using analog & digital clocks.	
1M.D.4	Organize, represent and interpret data with up to three categories.	

GEOMETRY		
STANDARD	SKILL	MASTERED

1.G.1	Distinguish between defining attributes. (triangles are closed and 3 sided) versus non-defining attributes (color, orientation, overall size.)	
1.G.2	Compose 2 dimensional shapes (rectangles, squares, trapezoids, triangles, half circles and quarter circles.) or 3 dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.	
1.G.3	Partition circles and rectangles into two and four equal shares, describe the shares using the words <i>halves</i> , <i>fourths</i> , and <i>quarters</i> and use the phrases <i>half of</i> , <i>fourth of</i> and <i>quarter of</i> . Describe the whole as two of, or four of the shares.	



SECOND GRADE

OPERATIONS AND ALGEBRAIC THINKING		
STANDARD	SKILL	MASTERED
2.OA.1	Use addition and subtraction within 100 to solve one-and two step word problems involving situations of adding to taking from putting together, taking apart and comparing with unknowns in all positions.	
2.OA.2	Fluently add and subtract within 20 using mental strategies.	
2.OA.3	Determine whether a group of objects (up to 20) has an odd or even number of members by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.	
2.OA.4	Use addition to find the total number of objects arranged in rectangular arrays within up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	

NUMBER AND OPERATIONS IN BASE TEN		
STANDARD	SKILL	MASTERED
2.NBT.1	Understand that three digits of a three digit number represent amounts of hundreds, tens and ones. EX: 706 =7 hundreds, 0 tens and 6 ones.	
2.NBT.2	Count within 1000, skip-count by 5s, 10s and 100s.	
2.NBT.3	Read and write numbers to 1000 using base ten numerals, number names and expanded form.	
2.NBT.4	Compare two three-digit numbers based on meanings of the hundreds, tens and ones digits using $<$, $>$ and $=$.	
2.NBT.5	Fluently add and subtract within 100 using strategies based on place value, properties of operation and or the relationship between addition and subtraction.	
2.NBT.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.	
2.NBT.7	Add and subtract within 1000, using concrete models or drawings and strategies based on place value and properties of operations.	
2.NBT.8	Mentally add 10 or 100 to a given number 100-900 and mentally subtract 10 or 100 from a given number 100-900.	
2.NBT.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.	

MEASUREMENT AND DATA		
STANDARD	SKIL	MASTERED
2.M.D.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter stick, and measuring tapes.	
2.M.D.2	Measure the length of an object twice, using the length of different units of lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	
2.M.D.3	Estimate lengths using units of inches, feet, centimeters and meters.	
2.M.D.4	Measure to determine how much longer one object is than another, expressing the length differences in terms of standard length unit.	
2.M.D.5	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units.	
2.M.D.6	Represent whole numbers as lengths from 0 on a number line diagrams	

	with equally spaced points corresponding to the numbers 0, 1, 2... and represent whole-number sums and differences within 100 on a number line diagram.	
2.M.D.7	Tell and write time from analog and digital clocks to the nearest five minutes using am and pm.	
2.M.D.8	Solve word problems involving dollar bills, quarters, dimes, nickels and pennies.	
2.M.D.9	Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot where the horizontal scale is marked off in whole number units.	
2.M.D.10	Draw a picture graph and a bar graph (with a single unit scale) to represent a data set with up to four categories.	

GEOMETRY		
STANDARD	SKILL	MASTERED
2.G.1	Recognize and draw shapes having specified attributes such as a given number of angles or a given number of equal faces.	
2.G.2	Partition a rectangle into rows and columns of the same-sized squares and count to find the total number of them.	
2.G.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of... describe the whole as two halves, three thirds, four fourths.	



THIRD GRADE

OPERATIONS AND ALGEBRAIC THINKING		
STANDARD	SKILL	MASTERED
3.OA.1	Interpret products of whole numbers. 5×7 as the number of objects in 5 groups of 7 objects each.	
3.OA.2	Interpret whole-number quotients of whole numbers; EX: $56/8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares.	
3.OA.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays and measurement qualities.	
3.OA.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. EX: Determine the unknown number that makes the equation true... $8 \times ? = 48$	
3.OA.5	Apply properties of operations as strategies to multiply and divide. EX: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$	
3.OA.6	Understand division as an unknown-factor problem. Find $32/8$ by finding the number that makes 32 when multiplied by 8.	
3.OA.7	Fluently multiply and divide within 100, using strategies such as relationship multiplication and division. EX: Knowing $8 \times 5 = 40$ means you also know $40/5 = 8$.	
3.OA.8	Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing in for the unknown quantity.	
3.OA.9	Identify arithmetic patterns and explain them using properties of operations. EX: $4 \times$ a number is always even, and explain why 4 times a number can be decomposed to two equal addends.	

NUMBER AND OPERATIONS IN BASE TEN		
STANDARD	SKILL	MASTERED
3.NBT.1	Use place value understanding to round to whole numbers to the nearest 10 or 100.	
3.NBT.2	Fluently add and subtract within 1000 strategies and algorithms based on place value, properties of operations and /or the relationship between addition and subtraction.	
3.NBT.3	Multiply one-digit whole numbers by multiples of 10 in the range of 10-90. EX: 9×80 , 5×60 using strategies based on place value and properties of operations.	

NUMBER AND OPERATIONS -FRACTIONS		
STANDARD	SKILL	MASTERED
3.N.F.1	Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by parts of size $1/b$. (<i>with denominators of 2,3,4,6,8</i>)	
3.N.F.2	Understand a fraction as a number on the number line: represent fractions on a number line diagram. <ol style="list-style-type: none"> a. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the 	

	<p>endpoint of the part based at 0 locates the number $1/b$ on the number line.</p> <p>b. Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.</p>	
3.N.F.3	<p>Explain equivalence of fractions in special cases, and compare fractions by reasoning their size.</p> <p>a. Understand 2 fractions as equivalent if they are same size or same point on the number line.</p> <p>b. Recognize and generate simple equivalent fraction $1/2 = 2/4$; $4/6 = 2/3$</p> <p>c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. EX: $3 = 3/1$. $4/4 = 1$</p> <p>d. Compare two fractions with the same numerator or the same denominator by reasoning about their symbols $>$, $=$, $<$</p>	

MEASUREMENT & DATA		MASTERED
STANDARD	SKILL	
3.MD.1	Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes EX: by representing the problem on a number line diagram.	
3.MD.2	Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms, and liters. Add, subtract multiply or divide to solve one-step word problems.	
3.MD.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one and two step “how many more” and “how many less” problems using information presented in scaled bar graphs. EX: draw a bar graph in which each square in the bar graph might represent 5 pets.	
3.MD.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units-whole numbers, halves or quarters.	
3.MD.5	Recognize area as an attribute of plane figures and understand concepts of area measurement. <p>a. A square with side length 1 unit called a unit square, is said to have “one square unit” of area and can be used to measure area.</p> <p>b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.</p>	
3.MD.6	Measure areas by counting unit squares (square cm, sq in, sq ft)	
3.MD.7	Relate area to the operations of multiplication and addition. <p>a. Find the area of a rectangle with whole number side lengths by tiling it and show that the area is the same found by multiplying.</p> <p>b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas.</p> <p>c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$.</p>	
3.MD.8	Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknowns side length and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	

STANDARD	SKILL	MASTERED
3.G.1	Understand that shapes in different categories (rhombuses, rectangles and others) may share attributes that can define a category. Recognize that rectangles, rhombuses and squares as examples of quadrilaterals.	
3.G.2	Partition shapes into parts with equal area.	



FOURTH GRADE

OPERATIONS AND ALGEBRAIC THINKING		
STANDARD	SKILL	MASTERED
4.OA.1	Interpret a multiplication equations as a comparison, EX: $35=5 \times 7$ and that 35 is 5 times as many as 7 and 7 times as many as 5.	
4.OA.2	Multiply or divide to solve word problems involving multiplicative comparison.	
4.OA.3	Solve multi-step word problems posed with whole numbers and having whole number answers using the four operations.	
4.OA.4	Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 3-100 is a multiple of a given on-digit number. Identify prime or composite.	
4.OA.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. EX: Given the rule “add 3” and the starting number 1, generate terms in the resulting number sequence.	

NUMBER AND OPERATIONS IN BASE TEN		
STANDARD	SKILL	MASTERED
4.NBT.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. EX: 700 / 70 10	
4.NBT.2	Read and write multi-digit whole numbers using base-ten numbers using base-ten numerals, number names and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place.	
4.NBT.3	Use place value understanding to round multi-digit whole numbers to any place.	
4.NBT.4	Fluently add and subtract multi digit whole numbers using the standard algorithm.	
4.NBT.5	Multiply a whole number of up to four digits by a one digit whole number, and multiply two –two digit numbers, using strategies base on place value and the properties of operations.	
4.NBT.6	Find whole number quotient and remainders with up to four –digit dividends and one digit divisors, using strategies based on place value.	

NUMBER AND OPERATIONS -FRACTIONS		
STANDARD	SKILL	MASTERED
4.N.F.1	Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models with attention do how the number and size of the parts differ even though the two fractions themselves are the same.	
4.N.F.2	Compare two fractions with different numerators and different denominators by creating common denominators or numerators or by comparing it to a benchmark fraction such as $1/2$. (expected with denominators of 2,3,4,5,6,8,10, 12)	
4.N.F.3	Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.	
4.N.F.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	

4.N.F.5	Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.	
4.N.F.6	Use decimal notation for fractions with denominators 10-100.	
4.N.F.7	Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the decimals refer to the same whole.	

MEASUREMENT & DATA		
STANDARD	SKILL	MASTERED
4.MD.1	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz;... Within a single system of measurement express measurements in a larger unit in terms of a smaller unit.	
4.MD.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	
4.MD.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems. EX: find the width of a rectangular room given the area of the flooring and the length.	
4.MD.4	Make a line plot to display a data set of measurements in fractions of a unit. (1/2, 1/4, 1/8) Solve problems involving addition and subtraction of fractions by using information presented in line plots.	
4.MD.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.	
4.MD.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	
4.MD.7	Recognize angle measure as additive. When an angle is decompose into non-overlapping parts the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world mathematical problems.	

GEOMETRY		
STANDARD	SKILL	MASTERED
4G.1	Draw points, lines, line segments, rays, angles, and perpendicular and parallel lines.	
4.G.2	Classify two dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of specifies size. Recognize right triangles as a category and identify right triangles.	
4.G.3	Recognize a line of symmetry for a two dimensional figure as a line across the figure such that the figures can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.`	



FIFTH GRADE

OPERATIONS AND ALGEBRAIC THINKING		
STANDARD	SKILL	MASTERED
5.OA.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	
5.OA.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. EX: add 8 and 7 then multiply by 2 as $2 \times (8+7)$.	
5.OA.3	Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.	

NUMBER AND OPERATIONS IN BASE TEN		
STANDARD	SKILL	MASTERED
5.NBT.1	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	
5.NBT.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10.	
5.NBT.3	Read, write and compare decimals to thousandths. Read and write decimal to thousandths using base-ten numerals, number names, and expanded form.	
5.NBT.4	Use place value understanding to round decimals to any place.	
5.NBT.5	Fluently multi-digit whole numbers using the standard algorithm.	
5.NBT.6	Find whole-number quotients of whole number with up to four digit dividend and two –digit divisors, using strategies based on place value, the properties of operations, and /or the relationship between multiplication and division.	
5.NBT.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawing and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	

NUMBER AND OPERATIONS -FRACTIONS		
STANDARD	SKILL	MASTERED
5.N.F.1	Add and subtract fractions with unlike denominators by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.	
5.N.F.2	Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators by using visual fraction models or equations to represent the problem.	
5.N.F.3	Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$) Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers.	
5.N.F.4	Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.	

	<ul style="list-style-type: none"> a. Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q/b$. b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. 	
5.N.F.5	<p>Interpret multiplication as scaling by:</p> <ul style="list-style-type: none"> a. Comparing the size of a product to the size of the other factor, without performing the indicated multiplication. b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number. 	
5.N.F.6	Solve real world problems involving multiplications of fractions and mixed numbers EX: by using visual fraction models or equations to represent the problem.	
5.N.F.7	Apply and extend previous understanding of division to divide unit fractions by whole numbers and whole numbers by unit fractions.	

MEASUREMENT & DATA		
STANDARD	SKILL	MASTERED
5.MD.1	Convert among different-sized standard measurement units within a given measurement system and use these conversions in solving multi-step real world problems.	
5.MD.2	Make a line plot to display a set of measurement in fraction of a unit ($1/2$, $1/4$, $1/8$)	
5.MD.3	Recognize volume as an attribute of solid figures and understand concepts of volume measurement.	
5.MD.4	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.	
5.MD.5	Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.	

GEOMETRY		
STANDARD	SKILL	MASTERED
5G.1	Use pair of perpendicular number lines, called axes to define a coordinate system, with the intersection of the lines arrange to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates.	
5.G.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	
5.G.3	Understand that attributes belonging to a category of two dimensional figures also belong to all subcategories of that category. <i>All rectangles have four right angles and squares are rectangles, so all squares have four right angles.</i>	
5.G.4	Classify two dimensional figures in a hierarchy based on properties.	



Common Core Standards

SIXTH GRADE

RATIOS AND PROPORTIONAL RELATIONSHIPS		
STANDARD	SKILL	MASTERED
6.RP.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. EX ratio of wings to beaks in a bird house was 2:1	
6.RP.2	Understand the concept of a unit rate.	
6.RP.3	Use ratio and rate reasoning to solve real-world and mathematical problems by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams or equations.	

THE NUMBER SYSTEM		
STANDARD	SKILL	MASTERED
6.NS.1	Interpret and compute quotients of fractions and solve word problems involving division of fractions by using visual fraction models and equations to represent the problem.	
6.NS.2	Fluently divide multi-digit numbers using the standard algorithm.	
6.NS.3	Fluently add, subtract, multiply and divide multi-digit decimals using the standard algorithm for each operation.	
6.NS.4	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1-10 with a common factor as a multiple of a sum of two whole numbers with now common factor.	
6.NS.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values.	
6.NS.6	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.	
6.NS.7	Understand ordering and absolute value of rational numbers.	
6.NS.8	Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate and the second coordinate.	

EXPRESSIONS & EQUATIONS		
STANDARD	SKILL	MASTERED
6.EE.1	Write and evaluate numerical expressions involving whole-number exponents.	
6.EE.2	Write, read, and evaluate expressions in which letters stand for numbers.	
6.EE.3	Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression $3(2+x)$ to produce the equivalent expression $6+3x$;	

6.EE.4	Identify when two expressions are equivalent.	
6.EE.5	Understand solving an equation or inequality as a process of answering a question; which values from a specified set, if any, make the equation or inequality true.	
6.EE.6	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem, understand that a variable can represent an unknown number or depending on the purpose at hand, any number in a specified set.	
6.EE.7	Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ for cases in which p , q and x are nonnegative rational numbers.	
6.EE.8	Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or conditions in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions.	
6.EE.9	Use variables to represent two quantities in a real-world problem that change in relationship to one another: EX $d = 65t$ to represent the relationship between distance and time.	

GEOMETRY		
STANDARD	SKILL	MASTERED
6.G.1	Find the area of right triangles, other triangles, special quadrilaterals and polygons by composing into rectangles or decomposing into triangles and other shapes.	
6.G.2	Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths and show that the volume is the same as it would be found by multiplying the edge lengths of the prism.	
6.G.3	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate.	
6.G.4	Represent three-dimensional figures using nets made up of rectangles and triangles and use the nets to find the surface area of these figures.	

STATISTICS AND PROBABILITY		
STANDARD	SKILL	MASTERED
6.SP.1	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.	
6.SP.2	Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread and overall shape.	
6.SP.3	Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	
6.SP.4	Display numerical data in plots on a number line including dot plots, histograms and box plots.	
6.SP.5	Summarize numerical data sets in relation to their context, such as by: <ul style="list-style-type: none"> a. Reporting the number of observations b. Describing the nature of the attribute under investigation including how it was measured and its units of measurement. c. Giving quantitative measures of center (median/mean) and variability as well as describing any overall pattern. 	



Common Core Standards

SEVENTH GRADE

RATIOS AND PROPORTIONAL RELATIONSHIPS		
STANDARD	SKILL	MASTERED
7.RP.1	Compute unit rates associated with ratios of fractions including lengths, areas and other quantities measured in like or different units.	
7.RP.2	Recognize and represent proportional relationships between quantities.	
7.RP.3	Use proportional relationships to solve multi-step ratio and percent problems.	

THE NUMBER SYSTEM		
STANDARD	SKILL	MASTERED
7.NS.1	Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction horizontally and vertically.	
7.NS.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	
7.NS.3	Solve real-world and mathematical problems involving the four operations with the rational numbers.	

EXPRESSIONS & EQUATIONS		
STANDARD	SKILL	MASTERED
7.EE.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	
7.EE.2	Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.	
7.EE.3	Solve multi-step real life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals.)	
7.EE.4	Use variable to represent quantities in a real world or mathematical problem and construct simple equations and to solve problems by reasoning about the quantities.	

GEOMETRY		
STANDARD	SKILL	MASTERED
7.G.1	Solve problems involving scale drawings of geometric figures, including computing actual lengths and area from a scale drawing and reproducing a scale drawing at a different scale.	
7.G.2	Draw geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle or no triangle.	
7.G.3	Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	

7.G.4	Know the formulas for the area and circumference of a circle and use them to solve problems.	
7.G.5	Use facts about supplementary, complementary, vertical and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	
7.G.6	Solve real-world and mathematical problems involving area volume and surface area of two and three dimensional objects composed of triangles, quadrilaterals, polygons, cubes and right prisms.	

STATISTICS AND PROBABILITY		
STANDARD	SKILL	MASTERED
7.SP.1	Understand that statistics can be used to gain information about population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of the population.	
7.SP.2	Use data from a random sample to draw inferences about a population with unknown characteristic of interest. Generate multiple samples of the same size to gauge the variation in estimates or predictions.	
7.SP.3	Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the between the centers by expressing it as a multiple of a measure of variability.	
7.SP.4	Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.	
7.SP.5	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring.	
7.SP.6	Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.	
7.SP.7	Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies.	
7.SP.8	Find probabilities of compound events using organized lists, table tree, diagrams and simulations.	



EIGHTH GRADE

THE NUMBER SYSTEM		
STANDARD	SKILL	MASTERED
8.NS.1	Know that numbers that are not rational are called irrational. Understand that every number has a decimal expansion; for rational numbers show that decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number	
8.NS.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram and estimate the value of expression.	

EXPRESSIONS AND EQUATIONS		
STANDARD	SKILL	MASTERED
8.EE.1	Know and apply the properties of integer exponents to generate equivalent numerical expressions.	
8.EE.2	Use square root and cube root symbols to represent solutions to equations.	
8.EE.3	Use numbers expressed in the form of a single digit times a whole number power of 10 to estimate very large or very small quantities and express as much one is than another.	
8.EE.4	Perform operations with numbers expressed in scientific notations including problems where both decimal and scientific notation are used.	
8.EE.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.	
8.EE.6	Use similar triangles to explain why the slope m is the same between any two distance points on a non vertical line in the coordinate plane:	
8.EE.7	Solve linear equations in one variable.	
8.EE.8	Analyze and solve pairs of simultaneous linear equations.	

FUNCTIONS		
STANDARD	SKILL	MASTERED
8.F.1	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.	
8.F.2	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables or by verbal descriptions.)	
8.F.3	Interpret the equation $y=mx+b$ as defining a linear function, whose graph is a straight line.	
8.F.4	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x,y) values.	
8.F.5	Describe qualitatively the functional relationship between two quantities by analyzing a graph.	

GEOMETRY		
STANDARD	SKILL	MASTERED
8.G.1	Verify experimentally the properties of rotations, reflections, and understand that a two dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations: given translations.	
8.G.2	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures: describe a sequence that exhibits the congruence between them.	
8.G.3	Describe the effect of dilations, translations, rotations and reflections on two-dimensional figures using coordinates.	
8.G.4	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations, given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.	
8.G.5	Use informal arguments to establish facts about the angle sum and exterior, angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.	
8.G.6	Explain a proof of the Pythagorean Theorem and its converse.	
8.G.7	Apply the Pythagorean Theorem to determine the unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	
8.G.8	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	

STATISTICS AND PROBABILITY		
STANDARD	SKILL	MASTERED
8.SP.1	Construct and interpret scatter plots for measurement data to investigate patterns of associations between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	
8.SP.2	Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.	
8.SP.3	Use the equation of a linear model to solve problems in the context of measurement data, interpreting the slope and intercept.	
8.SP.4	Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table.	