Grade 5 Math TEKS and Related Prior Learning TEKS

	Grade 5 Math TEKS/SE	Prior Learning TEKS/SE
5.2	Number and operations. The student applies mathematical process standards to represent, compare, and order positive rational numbers and understand relationships as related to place value. The student is expected to:	
5.2A	represent the value of the digit in decimals through the thousandths using expanded notation and numerals.	4.2A interpret the value of each place-value position as 10 times the position to the right and as one-tenth of the value of the place to its left. 4.2B represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals. 4.2E represent decimals, including tenths and hundredths, using concrete and visual models and money.
5.2B	compare and order two decimals to thousandths and represent comparisons using the symbols >, <, or =.	4.2C compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, <, or =. 4.2F compare and order decimals using concrete and visual models to the hundredths.
5.2C	round decimals to tenths or hundredths.	4.2D round whole numbers to a given place value through the hundred thousands place. 4.4G round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers.
5.3	Number and operations. The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy. The student is expected to:	
5.3A	estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division	4.4A add and subtract whole numbers and decimals to the hundredths place using the standard algorithm.
5.3B	multiply with fluency a three-digit number by a two-digit number using the standard algorithm.	4.4B determine products of a number and 10 or 100 using properties of operations and place value understandings.

		4.4C represent the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15. 4.4D use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two- digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties. 4.4H solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders.
5.3C	solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm.	4.4E represent the quotient of up to a four-digit whole number divided by a one- digit whole number using arrays, area models, or equations. 4.4F use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor. 4.4H solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders.
5.3D	represent multiplication of decimals with products to the hundredths using objects and pictorial models, including area models.	
5.3E	solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers.	
5.3F	represent quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models.	

5.3G	solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm.	
5.3H	represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations.	4.3E represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations.
5.3I	represent and solve multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models.	
5.3J	represent division of a unit fraction by a whole number and the division of a whole number by a unit fraction such as 1/3 ÷ 7 and 7 ÷ 1/3 using objects and pictorial models, including area models.	
5.3K	add and subtract positive rational numbers fluently.	4.3F evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0, 1/4, 1/2, 3/4, and 1, referring to the same whole.
5.3L	divide whole numbers by unit fractions and unit fractions by whole numbers.	
5.4	Algebraic reasoning. The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to:	
5.4A	identify prime and composite numbers.	
5.4B	represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity.	4.5A represent multi-step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity.
5.4C	generate a numerical pattern when given a rule in the form $y = ax$ or $y = x + a$ and graph.	4.5B represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence.
5.4D	recognize the difference between additive and multiplicative numerical patterns given in a table or graph.	4.5B represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence.
5.4E	describe the meaning of parentheses and brackets in a numeric expression.	

Grade 5 Math TEKS and Related Prior Learning TEKS

5.4F	simplify numerical expressions that do not involve exponents, including up to two levels of grouping	
5.4G	use concrete objects and pictorial models to develop the formulas for the volume of a rectangular prism, including the special form for a cube ($V = l \times w \times h$, $V = s \times s \times s$, and $V = Bh$).	4.5C use models to determine the formulas for the perimeter of a rectangle ($l + w + l + w$ or $2l + 2w$), including the special form for perimeter of a square ($4s$) and the area of a rectangle ($l \times w$).
5.4H	represent and solve problems related to perimeter and/or area and related to volume.	4.5D solve problems related to perimeter and area of rectangles where dimensions are whole numbers.
5.5	Geometry and measurement. The student applies mathematical process standards to classify two-dimensional figures by attributes and properties.	
5.5A	classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties.	4.6A classify and sort two- and three-dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language.
5.6	Geometry and measurement. The student applies mathematical process standards to understand, recognize, and quantify volume. The student is expected to:	
5.6A	recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes (n cubic units) needed to fill it with no gaps or overlaps if possible.	2.9F use concrete models of square units to find the area of a rectangle by covering it with no gaps or overlaps, counting to find the total number of square units, and describing the measurement using a number and the unit .
5.6B	determine the volume of a rectangular prism with whole number side lengths in problems related to the number of layers times the number of unit cubes in the area of the base.	3.6C determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row.
5.7	Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving measurement.	
5.7A	The student is expected to solve problems by calculating conversions within a measurement system, customary or metric.	4.8A identify relative sizes of measurement units within the customary and metric systems. 4.8B convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table.

Grade 5 Math TEKS and Related Prior Learning TEKS

		4.8C solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate.
5.8	Geometry and measurement. The student applies mathematical process standards to identify locations on a coordinate plane. The student is expected to:	
5.8A	describe the key attributes of the coordinate plane, including perpendicular number lines (axes) where the intersection (origin) of the two lines coincides with zero on each number line and the given point (0, 0); the *x*-coordinate, the first number in an ordered pair, indicates movement parallel to the *x*-axis starting at the origin; and the *y*-coordinate, the second number, indicates movement parallel to the *y*-axis starting at the origin.	3.7A represent fractions of halves, fourths, and eighths as distances from zero on a number line.
5.8B	describe the process for graphing ordered pairs of numbers in the first quadrant of the coordinate plane.	3.7A represent fractions of halves, fourths, and eighths as distances from zero on a number line.
5.8C	graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table.	3.7A represent fractions of halves, fourths, and eighths as distances from zero on a number line.
5.9	Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to:	
5.9A	represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots.	4.9A represent data on a frequency table, dot plot, or stem-and-leaf plot marked with whole numbers and fractions.
5.9B	represent discrete paired data on a scatterplot.	
5.9C	solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot.	4.9B solve one- and two-step problems using data in whole number, decimal, and fraction form in a frequency table, dot plot, or stem-and-leaf plot.
5.10	Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:	
5.10A	define income tax, payroll tax, sales tax, and property tax.	4.10A distinguish between fixed and variable expenses.

Grade 5 Math TEKS and Related Prior Learning TEKS

5.10B	explain the difference between gross income and net income.	1.1B identify income as a means of obtaining goods and services, oftentimes making choices between wants and needs.
5.10C	identify the advantages and disadvantages of different methods of payment, including check, credit card, debit card, and electronic payments.	4.10E describe the basic purpose of financial institutions, including keeping money safe, borrowing money, and lending.
5.10D	develop a system for keeping and using financial records.	4.10D describe how to allocate a weekly allowance among spending; saving, including for college; and sharing.
5.10E	describe actions that might be taken to balance a budget when expenses exceed income.	
5.10F	balance a simple budget.	