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Teacher Learning Report
Grade 4 Math

>> Introduction to Decimals	Unit	CHECKPOINT 1	2	3
4.2 Number and operations. The student applies mathematical process standards to represent, compare, and order whole numbers and decimals and understand relationships related to place value. **Connected Knowledge and Skills 4.3**				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
4.1(A) apply math in everyday situations Ⓚ 4.1(B) use problem-solving models Ⓚ *connected 4.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Representation of Whole Numbers and Decimals				
4.2(B) represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals Ⓚ				
4.2(A) 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				
4.2(E) represent decimals, including tenths and hundredths, using concrete and visual models and money				
4.2(H) determine the corresponding decimal to the tenths or hundredths place of a specified point on a number line				
4.3(G) represent fractions and decimals to the tenths or hundredths as distances from zero on a number line				
Comparison of Whole Numbers and Decimals				
4.2(C) compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, <, or =				
4.2(F) compare and order decimals using concrete and visual models to the hundredths				
Addition/Subtraction of Whole Numbers and Decimals				
4.4(A) add and subtract whole numbers and decimals to the hundredths place using the standard algorithm				

Process (Ways to Show)	Unit	CHECKPOINT 1	2	3
4.1(E) create representations 4.1(F) analyze information Ⓚ *connected 4.1(D), 4.1(G)*				

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>> TEKS clusters typically requiring additional time and focus in the curriculum

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>> Fractions	Unit	CHECKPOINT 1	2	3
4.3 Number and operations. The student applies mathematical process standards to represent and generate fractions to solve problems. **Connected Knowledge and Skills 4.2**				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
4.1(A) apply math in everyday situations Ⓚ 4.1(B) use problem-solving models Ⓚ *connected 4.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Representation of Fractions				
4.3(A) represent a fraction a/b as a sum of fractions $1/b$, where a and b are whole numbers and $b > 0$, including when $a > b$				
4.3(B) decompose a fraction in more than one way into a sum of fractions with the same denominator using concrete and pictorial models and recording results with symbolic representations				
Equivalency of Fractions				
4.2(G) relate decimals to fractions that name tenths and hundredths				
4.3(C) determine if two given fractions are equivalent using a variety of methods				
4.3(G) represent fractions and decimals to the tenths or hundredths as distances from zero on a number line		**Data included in "Introduction to Decimals"**		
Comparison of Fractions				
4.3(D) compare two fractions with different numerators and different denominators and represent the comparison using the symbols >, =, or < Ⓚ				
Addition/Subtraction of Fractions				
4.3(E) 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				
4.3(F) 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				

Process (Ways to Show)	Unit	CHECKPOINT 1	2	3
4.1(E) create representations 4.1(F) analyze information Ⓚ *connected 4.1(D), 4.1(G)*				

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>> Whole Number Operations	Unit	CHECKPOINT 1	2	3
4.4 **Number and operations.** The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy.				
4.5 **Algebraic reasoning.** The student applies mathematical process standards to develop concepts of expressions and equations.				
Connected Knowledge and Skills 4.2				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
4.1(A) apply math in everyday situations ⓧ				
4.1(B) use problem-solving models ⓧ *connected 4.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Estimation of Whole Numbers				
4.2(D) round whole numbers to a given place value through the hundred thousand place				
4.4(G) round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers				
Multiplication of Whole Numbers				
4.4(H) solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders				
4.4(B) determine products of a number and 10 or 100 using properties of operations and place value understandings				
4.4(C) represent the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15				
4.4(D) 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				
Division of Whole Numbers				
4.4(H) solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders				
4.4(E) represent the quotient of up to a four-digit whole number divided by a one-digit whole number using arrays, area models, or equations				
4.4(F) use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor				
Numerical Patterns				
4.5(B) 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 ⓧ				
All Operations of Whole Numbers				
4.5(A) represent multi-step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity ⓧ				

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Process (Ways to Show)	Unit	CHECKPOINT		
		1	2	3
4.1(E) create representations 4.1(F) analyze information Ⓚ *connected 4.1(D), 4.1(G)*				

>> TEKS clusters typically requiring additional time and focus in the curriculum

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Geometry	Unit	CHECKPOINT 1	2	3
4.6 **Geometry and measurement.** The student applies mathematical process standards to analyze geometric attributes in order to develop generalizations about their properties.				
4.7 **Geometry and measurement.** The student applies mathematical process standards to solve problems involving angles less than or equal to 180 degrees.				

Process (Tools to Know)		Unit	CHECKPOINT 1	2	3
4.1(A)	apply math in everyday situations Ⓚ				
4.1(B)	use problem-solving models Ⓚ *connected 4.1(C)*				

Content		Unit	CHECKPOINT 1	2	3
Two-Dimensional					
4.6(D)	classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size Ⓚ				
4.6(A)	identify points, lines, line segments, rays, angles, and perpendicular and parallel lines				
4.6(B)	identify and draw one or more lines of symmetry, if they exist, for a two-dimensional figure				
4.6(C)	apply knowledge of right angles to identify acute, right, and obtuse triangles				
Angle Measurements					
4.7(C)	determine the approximate measures of angles in degrees to the nearest whole number using a protractor				
4.7(D)	draw an angle with a given measure				
4.7(E)	determine the measure of an unknown angle formed by two non-overlapping adjacent angles given one or both angle measures				
4.7(A)	Illustrate the measure of an angle as the part of a circle whose center is at the vertex of the angle that is "cut out" by the rays of the angle. Angle measures are limited to whole numbers.				
4.7(B)	Illustrate degrees as the units used to measure an angle, where 1/360 of any circle is 1 degree and an angle that "cuts" *n*/360 out of any circle whose center is at the angle's vertex has a measure of *n* degrees. Angle measures are limited to whole numbers.				

Process (Ways to Show)		Unit	CHECKPOINT 1	2	3
4.1(E)	create representations				

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4.1(F)	analyze information Ⓚ	*connected 4.1(D), 4.1(G)*				

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Measurement	Unit	CHECKPOINT 1	2	3
4.8 Geometry and measurement. The student applies mathematical process standards to select appropriate customary and metric units, strategies, and tools to solve problems involving measurement. **Connected Knowledge and Skills 4.5**				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
4.1(A) apply math in everyday situations Ⓚ 4.1(B) use problem-solving models Ⓚ *connected 4.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Perimeter/Area				
4.5(D) solve problems related to perimeter and area of rectangles where dimensions are whole numbers Ⓚ				
4.5(C) 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 ($l \times w$)				
Related Measurement Concepts				
4.8(C) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate Ⓚ				
Conversions				
4.8(A) identify relative sizes of measurement units within the customary and metric systems				
4.8(B) 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				

Process (Ways to Show)	Unit	CHECKPOINT 1	2	3
4.1(E) create representations 4.1(F) analyze information Ⓚ *connected 4.1(D), 4.1(G)*				

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Data Analysis	Unit	CHECKPOINT 1	2	3
4.9 Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data.				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
4.1(A) apply math in everyday situations ⓚ 4.1(B) use problem-solving models ⓚ *connected 4.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Representation of Data				
4.9(A) represent data on a frequency table, dot plot, or stem-and-leaf plot marked with whole numbers and fractions				
Interpretation of Data				
4.9(B) 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 ⓚ				

Process (Ways to Show)	Unit	CHECKPOINT 1	2	3
4.1(E) create representations 4.1(F) analyze information ⓚ *connected 4.1(D), 4.1(G)*				

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Personal Financial Literacy	Unit	CHECKPOINT 1	2	3
4.10 **Personal financial literacy.** The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security.				

Process (Tools to Know)	Unit	CHECKPOINT 1	2	3
4.1(A) apply math in everyday situations Ⓚ 4.1(B) use problem-solving models Ⓚ *connected 4.1(C)*				

Content	Unit	CHECKPOINT 1	2	3
Budgets				
4.10(A) distinguish between fixed and variable expenses				
4.10(E) describe the basic purpose of financial institutions, including keeping money safe, borrowing money, and lending				
4.10(C) compare the advantages and disadvantages of various savings options				
4.10(D) describe how to allocate weekly allowance among spending, saving, including for college; and sharing				
Economics				
4.10(B) calculate profit in a given situation				

Process (Ways to Show)	Unit	CHECKPOINT 1	2	3
4.1(E) create representations 4.1(F) analyze information Ⓚ *connected 4.1(D), 4.1(G)*				

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PROCESS STANDARDS: MATHEMATICAL PROCESS STANDARDS		Unit	CHECKPOINT		
			1	2	3
4.1 The student uses mathematical processes to acquire and demonstrate mathematical understanding.	**Tools to Know**				
	Ways to Show				

TOOLS TO KNOW		Unit	CHECKPOINT		
			1	2	3
4.1(A)	apply mathematics to problems arising in everyday life, society, and the workplace Ⓚ				
4.1(B)	use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution Ⓚ				
4.1(C)	select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems				

WAYS TO SHOW		Unit	CHECKPOINT		
4.1(D)	communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate				
4.1(E)	create and use representations to organize, record, and communicate mathematical ideas				
4.1(F)	analyze mathematical relationships to connect and communicate mathematical ideas Ⓚ				
4.1(G)	display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication				