Essential Standard - Standard should be taught in depth – These are the major work of the grade level

Supporting Standard- Support essential standards -Students need an intermediate understanding of these standards

Additional Standard- Students need a basic foundation of these standards

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Quarter 1

Standards for Mathematical Practice

4 and 5 Standards for Mathematical Practice Posters.pdf (eriercd.org)

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively
3. Construct viable arguments and reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

CC.2.1.4.B.2 Use place value understanding and properties of oerations to perform multi-digit arithmetic (PA Core – NWEA)

Number Operations in Base Ten	**4.NBT.B.4**	Fluently add and subtract multi-digit whole numbers within 1,000,000 using the standard algorithm. *Required Fluency for Grade 4*
	4.NBT.B.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays and / or area models.
	4.NBT.B.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays and/or area models.

CC.2.1.4.B.1 Apply Place Value concepts to show an understanding of multi-digit whole numbers (PA Core-NWEA)

Number Operations in Base Ten	**4.NBT.A.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.
	4.NBT.A.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form.

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		Compare two multi-digit numbers based on meanings of the digits in each place, using >,<, and = symbols to record the results of the comparison.
	4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.
CC.2.2.4.A.1 Represent and solve problems involving the four operations (PA Core – NWEA)		
Operations and Algebraic Thinking	**4.OA.A.1**	Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.
	4.OA.A.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
	4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity.

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Quarter 2

Standards for Mathematical Practice

4 and 5 Standards for Mathematical Practice Posters.pdf (eriercd.org)

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6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

CC.2.2.4.A.1 Represent and solve problems involving the four operations (PA Core – NWEA)

Operations and Algebraic Thinking	**4.OA.A.1**	Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.
	4.OA.A.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
	4.OA.A.3	Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

CC.2.2.4.A.2 Develop or apply number theory concepts to find factors and multiples (PA Core – NWEA)

Operations and Algebraic Thinking	**4.OA.B.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 of 1-100 is a multiple of a given one-digit number. (Rules of divisibility).
		Determine whether a given whole number in the range 1-100 is prime or composite.

CC.2.4.4.A.4 Represent and interpret data involving fractions provided by a line plot (PA Core – NWEA)

Measurement and Data	**4.MD.B.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 the line plots.

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CC.2.1.4.C.1 Extend understanding of fractions to show equivalence and ordering (PA Core – NWEA) (Grade four expectations in this domain are limited to fractions with denominators 2,3,4,5,6,8,10,12 and 100)		
Numbers and Operations Fractions	**4.NF.A.1**	Explain why a fraction a/b is equivalent to a fraction (n x a)/(n x b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use the above principle to recognize and generate equivalent fractions.
	4.NF.A.2	Compare two fractions with different numerators and different denominators. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of the comparisons with symbols >,<, and =, and justify the conclusions, e.g., by using a visual fraction model.
CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers (PA Core-NWEA) (Grade four expectations in this domain are limited to fractions with denominators 2,3,4,5,6,8,10,12 and 100)		
Numbers and Operations Fractions	**4.NF.B.3.A**	Understand a fraction a/b with a>1 as a sum of fractions 1/b. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
	4.NF.B.3.B	Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation.
	4.NF.B.3.C	Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
	4.NF.B.3.D	Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.
	4.NF.B.4.A	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Understand a fraction a/b as a multiple of 1/b.
	4.NF.B.4.B	Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number.
	B.NF.B.4.C	Solve word problems involving multiplication of a fraction by a whole number.

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CC.2.2.4.A.1 Represent and solve problems involving the four operations (PA Core – NWEA)		
Operations and Algebraic Thinking	**4.OA.A.1**	Interpret a multiplication equation as a comparison.
	4.OA.A.2	Represent verbal statements of multiplicative comparisons as multiplication equations.
	4.OA.A.3	Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic (PA Core – NWEA)		
Number and Operations in Base Ten	**4.NBT.B.4**	Fluently add and subtract multi-digit whole numbers within 1,000,000 using the standard algorithm. *Required Fluency in Grade 4*
	4.NBT.B.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays and / or area models.
	4.NBT.B.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays and/or area models.

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Quarter 3

Standards for Mathematical Practice

4 and 5 Standards for Mathematical Practice Posters.pdf (eriercd.org)

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CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers (PA Core-NWEA)
(Grade four expectations in this domain are limited to fractions with denominators 2,3,4,5,6,8,10,12 and 100)

Number and Operations Fractions	**4.NF.B.3.A**	Understand a fraction a/b with a>1 as a sum of fractions 1/b. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
	4.NF.B.3.B	Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation.
	4.NF.B.3.C	Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
	4.NF.B.3.D	Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.
	4.NF.B.4.A	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Understand a fraction a/b as a multiple of 1/b.
	4.NF.B.4.B	Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number.
	4.NF.B.4.C	Solve word problems involving multiplication of a fraction by a whole number.

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CC.2.1.4.C.3 Connect decimal notation to fractions and compare decimal fractions -base 10 denominator (PA Core – NWEA)(Grade four expectations in this domain are limited to fractions with denominators 2,3,4,5,6,8,10,12 and 100)		
Number and Operations Fractions	**4.NF.C.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.NF.C.6	Use decimal notation for fractions with denominators 10 or 100.
	4.NF.C.7	Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, <, or =.
CC.2.4.4.A.1 Solve problems involving measurement conversions from a larger unit to a smaller unit (PA Core- NWEA)		
Measurement and Data	**4.MD.A.1**	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a small unit. Record measurement equivalents in a two-column table.
	4.MD.A.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 factions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
	4.MD.A.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

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CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic (PA Core – NWEA)		
Numbers and Operations in Base Ten	**4.NBT.B.4**	Fluently add and subtract multi-digit whole numbers within 1,000,000 using the standard algorithm. ***Required Fluency for Grade 4***
	4.NBT.B.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays and / or area models.
	4.NBT.B.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays and/or area models.

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Quarter 4

Standards for Mathematical Practice

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CC.2.4.4.A.1 Solve problems involving measurement conversions from a larger unit to a smaller unit (PA Core- NWEA)		
Measurement and Data	**4.MD.A.1**	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a small unit. Record measurement equivalents in a two-column table.
	4.MD.A.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 factions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number*r line diagrams that feature a measurement scale.
	4.MD.A.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems.
CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic (PA Core – NWEA)		
Number Operations in Base Ten	**4.NBT.B.4**	Fluently add and subtract multi-digit whole numbers within 1,000,000 using the standard algorithm. *Required Fluency in Grade 4*

Essential Standard - Standard should be taught in depth – These are the major work of the grade level

Supporting Standard- Support essential standards -Students need an intermediate understanding of these standards

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	4.NBT.B.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays and / or area models.
	4.NBT.B.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays and/or area models.
CC.2.2.4.A.1 Represent and solve problems involving the four operations (PA Core – NWEA)		
Operations and Algebraic Thinking	**4.OA.A.1**	Interpret a multiplication equation as a comparison
		Represent verbal statements of multiplicative comparisons as multiplication equations.
	4.OA.A.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
	4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity.
		Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
CC.2.2.4.A.4 Generate and analyze patterns using one rule (PA Core – NWEA)		
Operations and Algebraic Thinking	**4.OA.C.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.

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CC..2.4.4.A.6 Measure angles and use properties adjacent angles to solve problems (PA Core- NWEA)		
Measurement and Data	**4.MD.C.5**	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint and understand concepts of angle measurement.
	4.MD.C.5.A	An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.
	4.MD.C.5.B	An angle that turns through n one-degree angles is said to have an angle measure of n degrees.
	4.MD.C.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
	4.MD.C.7	Recognize angle measures as additive. When an angle is decomposed 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 and mathematical problems.
CC.2.3.4.A.1 Draw lines and angles and identify these in two-dimensional figures (PA Core – NWEA)		
Geometry	**4.G.A.1**	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
CC.2.3.4.A.3 Recognize symmetric shapes and draw lines of symmetry (PA Core- NWEA)		
Geometry	**4.G.A.2**	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. Recognize right triangles as a category and identify right triangles.
	4.G.A.3	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.