

Essential Questions	Domains & Clusters	3 rd Grade Skill		3	4	Vocabulary	Resources
How are multiplication and division related?	Operations and Algebraic Thinking	3.OA.1a	Describe whole number products in terms of factors.	M		Products Whole numbers Multiplication Array Equal groups Digit Solve Factor(s) Division Dividend Quotient Divisor	
		3.OA.1b	Draw a model to represent a given product.	M			
3.OA.1c		Create a manipulative model to represent a multiplication.	M				
3.OA.1d		State/list the factors of a given product.	M				
3.OA.1e		Translate word form in a multiplication context to numeric form and vice versa.	M				
3.OA.2a		Describe whole number division in terms of equal groups/partitions.	M				
3.OA.2b		Translate word form in a division context to numeric form and vice versa.	M				
3.OA.2c		Create a manipulative model to represent a division equation.	M				
3.OA.3a		Solve multiplication and division word problems within 100.	M				
3.OA.3b		Write an equation to represent a multiplication or division word problem with a symbol for the unknown.	M				
How do we use multiplication and division to solve problems?	Represent and solve problems involving multiplication and division.	3.OA.3c	Draw a visual representation (array, drawing, area model, etc.) for a given multiplication or division word problem.	M		Commutative property Associative property Distributive property	
		3.OA.3d	Choose the appropriate operation based on context clues in text.	M			
		3.OA.4a	Solve for a missing factor of a given product (divisor, dividend, or quotient) with a symbol for the unknown.	M			
		3.OA.4b	Evaluate the truth value of a product for a given factor.	M			
		3.OA.5a	Explain and give numeric example commutative, associative, and distributive property of multiplication.	M			
	Understand properties of multiplication and the relationship between multiplication and division.	3.OA.5b	State the property shown in a given multiplication equation.	M			

<p>What are the properties of multiplication?</p> <p>What strategies can we use to memorize facts?</p>	<p>Multiply and divide within 100.</p>	3.OA.6a	Describe division in terms of multiplication (inverse operations).	M		<p>Fact family Factor(s) Inverse operations</p> <p>Product Operation Relationship Digit Factor(s) Equation Estimation</p>		
		3.OA.6b	Solve division problems through application of fact families.	M				
		3.OA.7a	Fluently multiply and divide within 100 (know from memory all product of two one-digit numbers).	M				
		3.OA.7b	Describe the relationship between factors and products in terms of multiplication and division.	M				
		3.OA.8a	Solve two-step word problems using the four operations (apply order of operations rules: Multiplication & division are first (read left to right) then addition and subtraction are second (read left to right)).	M				
		3.OA.8b	Check solutions for a given problem using estimation strategies.	M				
	<p>Solve problems involving the four operations, and identify and explain patterns in arithmetic.</p>	3.OA.8c	Write an equation to represent a multiplication or division word problem with a symbol for the unknown.	M				
		3.OA.9a	Solve for missing number (term) in a given arithmetic pattern.	M				
		3.OA.9b	Explain a given numeric pattern shown in a table or chart.	M				
		3.OA.9c	Create a numeric pattern using addition & multiplication.	M				

Essential Questions	Domains & Clusters	3 rd Grade Skill		3	4	Vocabulary		Resources
		Why is understanding place value important?	Number and Operations in Base Ten	3.NBT.1a	Round whole numbers to the nearest.	M		
		3.NBT.1b	Explain the rounding rule and the rational (as related to the number line) for a given number to the nearest 10 or 100.	M				
		3.NBT.1c	State the value of a given digit 100,000.	M				
		3.NBT.1d	State the place value of a given digit 100,000.	M				

How do we round numbers to 1,000?	Use place value and properties of operations to perform multi-digit arithmetic.	3.NBT.1e	Write numbers in standard, expanded, and word form.	M		Hundreds Thousands Sum Difference Product	Word form Identity property
		3.NBT.2	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or subtraction between addition and subtraction.	M			
		3.NBT.3	Multiply one-digit whole numbers by multiples of 10 (range of 10-90).	M			
		3.NBT.4	Add and subtract fluently within 100,000. (Apply fluency with basic facts in columns.)	M			

Essential Questions	Domains & Clusters	3 rd Grade Skill		1	2	Vocabulary	Resources
What is a fraction?	<p>Number and Operations – Fractions</p> <p>Develop understanding of fractions as numbers.</p>	3.NF.1a	Define a fraction as partitioning one whole into equal parts. The number of equal parts is determined by the denominator of the fraction.	M		Partition Numerator Denominator Number line Fraction Equivalent fraction Equal to Greater than Less than	
		3.NF.1b	Draw/using manipulatives create a model representing the number of partitions of the whole (denominator), and how many you have/shaded in numerator.)	M			
3.NF.2a		Partition the number line between 0 and 1 into equal parts based on the denominator of the fraction.	M				
3.NF.2b		Partition the number line between 0 and 1 into equal parts based on the denominator of the fraction. Then mark a point on the number line where the fraction lies based on the numerator.	M				
3.NF.3a		Plot two or more equivalent fractions on a number line to prove equivalency.	M				
3.NF.3b		Explain why two fractions are equivalent.	M				
3.NF.3c		Draw/use manipulatives to translate numeric equivalent fractions to visual representation (vice versa).	M				
3.NF.3d		Compose whole number as fractions (vice versa).	M				
What are different types of fractions?							
How are fractions used in our daily lives?							
What are equivalent fractions?							

	3.NF.3e	Plot a whole number and its fractional equivalent on a number line.	M			
	3.NF.3f	Plot multiple fractional representations.	M			
	3.NF.3g	Order two fractions (numeric or visual representation) with the same numerator using $<$, $>$, $=$.	M			
	3.NF.3h	Order two fractions (numeric or visual representation) with the same denominator using $<$, $>$, $=$.	M			
	3.NF.3i	Explain the rules for fractions with the same numerator.	M			
	3.NF.3j	Explain the rules for fractions with the same denominator.	M			

Essential Questions	Domains & Clusters	3 rd Grade Skill		1	2	Vocabulary	Resources
How do we tell and write time to the nearest minute?	Measurement and Data	3.MD.1a	Write and read time to the nearest minute on an analog and digital clock.	M		Analog clock Digital clock Minute Hour Elapsed time Interval AM PM	
		3.MD.1b	Solve elapsed time in minutes.	M			
How do we choose the appropriate unit of measurement?	Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	3.MD.1c	Solve word problems requiring addition or subtraction of time intervals in minutes.	M			
		3.MD.2a	Estimate the amount of liquid/solid, using appropriate unit of measurement, based on real life applications (standard units/metric units).	M			
		3.MD.2b	Measure the amount of liquid/solid, using appropriate unit of measurement, based on real life applications (standard units/metric units).	M			
		3.MD.2c	Solve one-step mass or volume word problems using the appropriate operation to solve.	M			
		3.MD.3a	Construct a picture graph or bar graph with several categories based on a data set.	M			
	3.MD.3b	Construct a scale in which each bar/picture represents more than one object (one fish represents 5 fish/bar graph in increments of 10).	M		Picture graph Bar graph Scale "How many more" "How many less"		
	Represent and interpret data.						

<p>How do we represent information in a picture graph or bar graph?</p> <p>How do we measure perimeter and area of geometric shapes?</p>	<p>Geometric measurement: understand concepts of area and relate area to multiplication and to addition.</p>	3.MD.3c	Solve one and two step word problems where information is represented in a scaled bar graph. (Focus on phrases “how many more” and “how many less”).	M		<p>Halves Fourths/quarters Inches</p> <p>Square unit Square Area Plane figure Non-overlapping Unit square</p>		
		3.MD.4a	Measure and record lengths using a ruler.	M				
		3.MD.4b	Construct a line plot of gathered data marked with appropriate units (whole numbers, halves, or fourths/quarters).	M				
		3.MD.5a	Define a square unit as a square with sides equaling one.	I	M			
		3.MD.5b	Define the area of a square with sides equaling one as one square unit.	I	M			
		3.MD.5c	Define the area of a plane figure as the number of unit squares (both customary and standard/metric units).	I	M			
		3.MD.6	Measure the area of a figure by counting the number of square units (both customary and standard/metric units).	M				
		3.MD.7a	Solve the area of a rectangle by tiling and then counting the number of unit squares.	M				
		3.MD.7b	Describe the relationship between counting the number of unit squares and multiplying the side lengths in finding the area of a rectangle.	M				
		3.MD.7c	Solve the area of a rectangle by multiplying its side lengths.	M				
		3.MD.7d	Solve real-world area problems by either tiling or multiplying the side lengths.	M				
		3.MD.7e	Multiply length times (x) width to find the area of a given shape.	M				
		3.MD.8a	Solve real-world problem finding the perimeter of polygons.	M				
		3.MD.8b	Solve real-world problems finding a missing side of polygon given the perimeter.	M				
		3.MD.8c	Compare/contrast rectangles with the same perimeter and different area.	M				

Essential Questions	Domains & Clusters	3 rd Grade Skill		1	2	Vocabulary		Resources
How do we classify geometric shapes?	Geometry Reason with shapes and their attributes.	3.G.1a	Name shapes from visual representations.	M		Perimeter Area Polygon Rectangle Quadrilaterals Rhombus Square Parallelogram Trapezoid Angles Vertices Sides	Compare Contrast Opposite Parallel Polygon	
		3.G.1b	Categorize shapes based on their attributes (sides, vertices, angles).	M				
		3.G.1c	Compare/contrast shapes by their attributes.	M				
		3.G.1d	Draw quadrilaterals that cannot be classified as a rhombus, rectangle, parallelograms).	M				
		3.G.1e	Categorize quadrilaterals based on their attributes (rectangles share attributes of parallelograms).	M				
		3.G.2a	Partition shapes into equal parts/areas based on the denominator of the fraction.	M				
		3.G.2b	Define each part of the whole as a unit fraction.	M				

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