

## Mathematics Curriculum Grade 3

Anchor	Number	Third Grade Expectations	Every third grader should be able to:	Text pages or supplementary materials	Date Assessed	
<b>3A.Numbers and Operations</b>						
1.	Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems	3A.1.1	Apply place-value concepts and numeration to counting, ordering, grouping, and equivalency.	3A 1.1.1 Count, read, and write whole numbers to 100,000 and identify the place value of each digit. (Include matching base ten block representation for number.)		
				3A 1.1.2 Express 4-digit numbers in standard, expanded, and word form. Identify place-value for each digit up to 4 digits.		
				3A 1.1.3 Compare two whole numbers using =, <, and > through 10,000.		
				3A 1.1.4 Order a set of whole numbers (four numbers) from least to greatest or greatest to least through 10,000.		
				3A 1.1.5 Recognize a number as even, odd, or the multiple of a number through 10 (e.g., 25 is an odd number and a multiple of 5.)		
		3A.1.2	Use fractions to represent quantities as part of a whole or part of a set.	3A 1.2.1 Match physical models, illustrations, and abstract representations to appropriate fractions through 12ths.		
				3A 1.2.2 Compare a given pair or fractions using physical models (equivalent, greater than, or less than.)		
				3A 1.2.3 Express the appropriate fraction or mixed number for a given physical model or illustration. (Denominators through 8)		
		3A.1.3	Count, compare, and make change using a collection of coins and one-dollar bills.	3A 1.3.1 Count a collection of bills and coins less than \$20.00.		
				3A 1.3.2 Compare total values of combinations of coins and bills less than \$20.00.		
				3A 1.3.3 Make change for an amount up to \$20.00.		
				3A 1.3.4 Represent money in words, cent notation, and dollar notation. (e.g., 15 cents, 15 ¢, or \$0.15)		

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2.	Understand meanings of operations, use operations and understand how they relate to each other.	3A 2.1	Understand various meanings of operations and the relationship between them.	3A 2.1.1 Describe and use the inverse relationship between addition and subtraction and between multiplication and division using fact families.		
				3A 2.1.2 Represent multiplication as repeated addition, skip counting, with arrays, and as the area of a rectangle.		
				3A 2.1.3 Model and explain division in a variety of ways, including repeated subtraction, sharing, rectangular arrays, and by its inverse relationship to multiplication.		
		3A 2.2	Apply appropriate operations to solve word and real-life problems	3A 2.2.1 Write a story problem that models a simple addition, subtraction, multiplication, or division (with and without a remainder) expression.		
				3A 2.2.2 Write a mathematical expression that models a simple story problem.		
				3A 2.2.3 Choose the correct operation(s) and solve one- or two-step word problems.		
3.	Compute accurately and fluently and make reasonable estimates.	3A.3.1	Solve problems using addition, subtraction, and multiplication. (straight computation and word problems)	3A 3.1.1 Demonstrate mastery of all basic multiplication and division facts.		
				3A 3.1.2 Develop strategies for mental math.		
				3A 3.1.2 Solve addition and subtraction problems for up to 4 digits with and without regrouping in vertical and horizontal form.		
				3A 3.1.3 Multiply up to four digits by a one-digit multiplier with and without renaming.		
				3A 3.1.4 Divide two-digit numbers by a one-digit divisor with and without a remainder. (one-step only)		
				3A 3.1.4 Solve addition, subtraction, and multiplication of money.		
		3A 3.2	Use estimation skills to arrive at conclusions.	3A 3.2.1 Estimate sums and differences of quantities by rounding.		
				3A 3.2.2 Round to the nearest 10, 100, or 1000; amounts of money to the nearest dollar.		

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Anchor	Number	Third Grade Expectations	Every third grader should be able to:	Text pages or supplementary materials	Date Assessed
<b>3B. Measurement</b>					
1.	3B 1.1	Determine or calculate time and elapsed time.	3B 1.1.1 Recognize, show, and tell time to the minute on an analog and on a digital clock.		
			3B 1.1.2 Find elapsed time in increments of hours and 5-minute intervals.		
			3B 1.1.3 Name the months in order and tell the number of days in each month.		
	3B 1.2	Use attributes of length, area, volume, and weight of objects.	3B 1.2.1 Select an appropriate standard unit and tool for the attribute being measured.		
			3B 1.2.2 Compare and order objects of the same dimension according to length, area, volume or capacity, and weight (mass),		
			3B 1.2.3 Identify equivalent customary or metric units and carry out simple conversions within a system. (e.g., hours to minutes, feet to inches.)		
2.	3B 2.1	Determine the measurement of objects with standard and non-standard units.	3B 2.1.1 Use a ruler to measure to the nearest $\frac{1}{2}$ inch or centimeter.		
			3B 2.1.2 Use spring or balance scales to measure and compare weight (mass) of objects. (oz./lbs., grams/kilograms)		
			3B 2.1.3 Estimate, find, and compare areas/perimeters of polygons drawn on a grid.		
			3B 2.1.4 Measure capacity of containers in cups, pints, quarts, gallons, and/or liters.		
			3B 2.1.5 Use a thermometer to measure temperature on the Celsius and Fahrenheit scales.		
	3B 2.2	Estimate measurements of familiar objects.	3B 2.2.1 Match objects with appropriate measurements.		
			3B 2.2.2 Develop and use common referents and benchmarks to make reasonable estimates of weight, length, and/or capacity of familiar objects.		

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<b>3C. Geometry</b>					
1.	3C 1.1	Identify and/or describe two- and three- dimensional objects.	3C 1.1.1 Name/identify/describe attributes for 2-dimensional shapes: circle, polygon, triangle, quadrilateral, square, rectangle, rhombus, trapezoid, parallelogram pentagon, hexagon, octagon.		
			3C 1.1.2 Identify points, lines, line segments or rays; parallel, intersecting, and perpendicular lines. Use these terms to describe 2-dimensional figures.		
			3C 1.1.3 Name/identify and describe attributes for geometric shapes in 3-dimensions: sphere, cube, cone, cylinder, pyramid, and rectangular prism.		
	3C 1.2	Identify/draw right angles and right triangles.	3C 1.2.1 Identify /draw / model right angles and right triangles using line segments, in geometric figures, on a geoboard, and/or in the real world.		
	3C 1.3		3C 1.3.1 Build, draw, and measure geometric figures to determine their properties.		
			3C 1.3.2 Find and describe geometric shapes and structures in the real world.		
2.	3C 2.1	Apply the concepts of transformations and symmetry.	3C 2.1.1 Use flips (reflections), slides (translations), and turns (rotations) of simple 2-dimensional figures to describe the concepts of congruence, symmetry, and similarity.		
			3C 2.1.2 Identify/draw a line of symmetry in a 2-dimensional figure.		
			3C 2.1.3 Identify symmetrical 2-dimensional figures.		
3.	3C 3.1	Specify locations and solve spatial problems.	3C 3.1 Match points or objects located on a simple grid to an ordered pair.		

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<b>3D. Algebra Concepts</b>					
1.	Demonstrate an understanding of patterns, relations, and functions.	3D 1.1	Recognize, describe, extend, create, and replicate a variety of patterns.	3D 1.1.1 Recognize, describe, extend, create, and replicate a variety of patterns including attribute, activity, number, and geometric patterns.	
				3D 1.1.2 Identify the rule for a pattern.	
		3D 1.2	Demonstrate simple function rules.	3D 1.2.1 Determine the missing element in a function table (In/Out table).	
				3D 1.2.2 Identify simple function rules when the table is provided- (e.g., Solve "What's My Rule?" function problems.)	
2.	Represent and /or analyze mathematical situations using numbers, symbols, words, tables, and/or graphs.	3D 2.1	Create/model expressions, equations, and inequalities to match a problem situation.	3D 2.1.1 Create or match a story to a given combination of symbols (+, -, x, ÷, <, =, >) and numbers.	
				3D 2.1.2 Match a number sentence using a combination of symbols (+, -, x, ÷, <, =, >) and numbers for a given story.	
				3D 2.1.3 Use concrete objects and/or "trial and error" to solve number sentences and check if solutions are reasonable and accurate.	
				3D 2.1.4 Determine when sufficient information is present to solve a problem and explain how to solve a problem.	
		3D 2.2	Determine the missing number or symbol in a number sentence.	3D 2.2.1 Find a missing number or symbol that makes a number sentence true.	
4.	Describe or use models to represent quantitative relationships.	3D 3.1	Use mathematical patterns and properties to represent quantitative relationships.	3D 3.1.2 Write number sentences using a combination of symbols (+, -, x, ÷, <, =, >) and numbers to represent mathematical relationships in everyday situations.	
				3D 3.1.2 Recognize and use the commutative, associative, and identity properties of addition.	
				3D 3.1.3 Recognize and use the commutative, associative, zero, and identity properties of multiplication.	

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<b>3E. Data Analysis and Probability</b>					
1.	Formulate or answer questions that can be addressed with data and/or collect, organize, and display relevant data to answer them.	3E 1.1	Answer questions based on data shown on tables, charts, bar graphs, and pictographs.	3E 1.1.1 Make predictions and pose questions to investigate a topic using data collection.	
				3E 1.1.2 Explain a data display or write a story based on information from a graph.	
				3E 1.1.3 Formulate, interpret, and answer questions based on data shown on tables, charts, bar graphs, and/or pictographs.	
		3E 1.2	Organize or display data using tables, charts, bar graphs, or pictographs.	3E 1.2.1 Gather, organize, and display data using pictographs, tallies, line plots, bar graphs, line graphs, or circle graphs.	
			3E 1.2.2 Translate information from one type of data display to another. (e.g., tally charts to bar graphs)		
2.	Select and/or use appropriate statistical methods to analyze data.	3E 2.1	Describe and analyze data using grade-appropriate vocabulary.	3E 2.1.1 Analyze data shown on tables, tally charts, pictographs, Venn diagrams or bar graphs using the vocabulary: largest, smallest, most often, least often, and middle.	
3.	Understand and/or apply basic concepts of probability or outcomes.	3E 3.1	Predict and/or measure the likelihood of events.	3E 3.1.1 Collect and record data, look at the frequency of events, and make predictions for outcomes in simple probability experiments.	
				3E 3.1.2 Use the language of probability to describe the likelihood of an event: more/most likely, less/least likely, equally likely, or impossible.	