BRIDGES® IN MATHEMATICS

GRADE 3 Wisconsin Alignment Guide

WI Domains	Clusters & Standards	Bridges Units	Number Corner	Correlations
Operations & Algebraic Thinking	**A. Represent and solve problems involving multiplication and division.**			
	M.3.OA.A.1 Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each.	2 ,5, 7	Sep–Dec	3.OA.1
	M.3.OA.A.2 Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each.	2, 5, 7	May	3.OA.2
	M.3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	2, 5, 7	Nov	3.OA.3
	B. Understand properties of multiplication and the relationship between multiplication and division.			
	M.3.OA.B.4 Apply properties of operations as strategies to multiply and divide. Student use of the formal terms for these properties is not necessary.	2, 7	Nov, Dec, Mar–May	3.OA.5
	M.3.OA.B.5 Understand division as an unknown-factor problem.	2, 5	Jan–May	3.OA.6
	C. Multiply and divide within 100.			
	M.3.OA.C.6 Use multiplicative thinking to multiply and divide within 100. **a.** Use the meanings of multiplication and division, the relationship between the operations, and properties of operations to develop and understand strategies to multiply and divide within 100. **b.** Flexibly and efficiently use strategies, the relationship between the operations, and properties of operations to find products and quotients with multiples of 0, 1, 2, 5, and 10 within 100.	2, 5	Nov–May	3.OA.7

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Operations & Algebraic Thinking	**D. Solve problems involving the four operations, and identify and explain patterns in arithmetic.**			
	M.3.OA.D.7 Solve two-step word problems, posed with whole numbers and having whole number answers, using the four operations. Represent these problems using one or two equations with a letter standing for the unknown quantity. If one equation is used, grouping symbols (i.e. parentheses) may be needed. Assess the reasonableness of answers using mental computation and estimation strategies.	2, 3, 4, 5, 7	Oct, Jan	3.OA.8
	M.3.OA.D.8 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.	1, 2, 5, 7	Sep, Dec–May	3.OA.9
Number & Operations in Base Ten	**A. Use place value understanding and properties of operations to perform multi-digit arithmetic, using a variety of strategies.**			
	M.3.NBT.A.1 Use place value understanding to generate estimates for problems in real-world situations, with whole numbers within 1,000, using strategies such as mental math, benchmark numbers, compatible numbers, and rounding. Assess the reasonableness of their estimates.	1, 3	Nov, Dec	3.NBT.1
	M.3.NBT.A.2 Flexibly and efficiently add and subtract within 1,000 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	1, 2, 3, 4	Sep–Jan	3.NBT.2
	M.3.NBT.A.3 Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.	7	Feb	3.NBT.3
	B. Develop understanding of fractions as numbers.			
	M.3.NF.A.1 Understand a unit fraction as the quantity formed when a whole is partitioned into equal parts and explain that a unit fraction is one of those parts.	4, 6, 7	Oct–Feb, Apr	3.NF.1
	M.3.NF.A.2 Understand and represent a fraction as a number on the number line. **a.** Understand the whole on a number line is defined as the interval from 0 to 1 and the unit fraction is defined by partitioning the interval into equal parts (i.e., equal-sized lengths). **b.** Represent fractions on a number line by iterating lengths of the unit fraction from 0. Recognize that the resulting interval represents the size of the fraction and that its endpoint locates the fraction as a number on the number line.	4, 7	Jan–May	3.NF.2

WI Domains	Clusters & Standards	Bridges Units	Number Corner	Correlations
Number & Operations in Base Ten	**B. Develop understanding of fractions as numbers (continued).**			
	M.3.NF.A.3 Explain equivalence of fractions and compare fractions by reasoning about their size. **a.** Understand two fractions as equivalent (equal) if they are the same size or name the same point on a number line. **b.** Recognize and generate simple equivalent fractions, and explain why the fractions are equivalent by using a visual fraction model. **c.** Express whole numbers as fractions (3 = 3/1), and recognize fractions that are equivalent to whole numbers (4/4 = 1). **d.** Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Justify the conclusions by using a visual fraction model, and describe the result of the comparison using words and symbols (>, =, and <).	4, 7	Oct–May	3.NF.3
Measurement & Data	**A. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.**			
	M.3.MD.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line.	4	Jan, Mar, Apr	3.MD.1
	M.3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l), excluding compound units such as cm^3 and finding the geometric volume of a container. Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	4	Oct, Dec, Feb	3.MD.2
	B. Represent and interpret data.			
	M.3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.	2	Sep, Feb, Mar, May	3.MD.3
	M.3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, fourths.	4	N/A	3.MD.4

WI Domains	Clusters & Standards	Bridges Units	Number Corner	Correlations
Measurement & Data	**C. Geometric measurement: understand concepts of area and relate area to multiplication and to addition.**			
	M.3.MD.C.5 Recognize area as an attribute of plane figures and understand concepts of area measurement. **a.** A square with side length 1 unit, called "a unit square" is said to have "one square unit" of area, and can be used to measure area. **b.** A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.	5, 6	Feb, Mar	3.MD.5
	M.3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft., and improvised units).	5, 6	Feb, Mar	3.MD.6
	M.3.MD.C.7 Relate area to the operations of multiplication and addition. **a.** Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. **b.** Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. **c.** Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning. **d.** Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.	2, 5, 6, 7	Nov, Mar	3.MD.7
	D. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.			
	M.3.MD.D.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	6	Mar	3.MD.8
Geometry	**A. Reason with shapes and their attributes.**			
	M.3.G.A.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	6	Oct	3.G.1
	M.3.G.A.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.	4, 6, 7	Dec, May	3.G.2

Note

The revised Wisconsin standards remove CCSS standard 3.OA.4 and renumber the remaining standards in the Operations and Algebraic Thinking domain. The revised standards clarify how students may flexibly and efficiently add and subtract within 1,000 using multiple strategies. The language "know from memory" has also been removed from the revised standards.

The most significant revision to the Grade 3 standards is within the multiplication and division fluency standard, which limits the range of factors to the foundational facts: *M.3.OA.C.6 Flexibly and efficiently use strategies, the relationship between the operations, and properties of operations to find products and quotients with multiples of 0, 1, 2, 5, and 10 within 100.*

The Number Corner Computational Fluency workouts for February through May provide students opportunities to practice derived fact strategies, and prepare for demonstrating efficient and flexible strategies with all factors in Grade 4.

Reference

Wisconsin Department of Public Instruction. (2021). ***Mathematics in Wisconsin: Professional learning modules***.