bridges in mathematics

GRADE 3

Bridges & Number Corner Third Edition

CORRELATIONS

Common Core Standards for Mathematics

number corner

3 Standards for Mathematical Process

Standard	Descriptor	Citations	
SMP Standards for Mathematical Process			
SMP.1	Make sense of problems and persevere in solving them.	**Bridges in Mathematics** Unit 2: M1 S1; M1 S2 Unit 3: M1 S1; M3 S1 Unit 4: M2 S3 Unit 5: M1 S4; M2 S1 Unit 7: M4 S4 Unit 8: M1 S3; M4 S1	**Number Corner** September: Solving Problems October: Solving Problems November: Solving Problems February: Calendar Collector March: Solving Problems April: Calendar Collector, Solving Problems May: Solving Problems
SMP.2	Reason abstractly and quantitatively.	**Bridges in Mathematics** Unit 1: M2 S1; M4 S3; M4 S5 Unit 2: M2 S5 Unit 3: M1 S1 Unit 4: M1 S2 Unit 5: M4 S4 Unit 7: M4 S1 Unit 8: M3 S6; M4 S1; M3 S6	**Number Corner** September: Computational Fluency November: Solving Problems January: Solving Problems April: Calendar Grid May: Solving Problems
SMP.3	Construct viable arguments and critique the reasoning of others.	**Bridges in Mathematics** Unit 1: M2 S4; M3 S3; M4 S2 Unit 2: M1 S1 Unit 3: M1 S6; M4 S2 Unit 4: M3 S3 Unit 5: M2 S4 Unit 6: M4 S3 Unit 8: M4 S1	**Number Corner** October: Solving Problems November: Computational Fluency December: Calendar Grid January: Solving Problems February: Solving Problems March: Solving Problems May: Calendar Collector, Number Line
SMP.4	Model with mathematics.	**Bridges in Mathematics** Unit 1: M1 S1; M1 S2; M4 S5 Unit 2: M2 S2 Unit 4: M3 S4; M4 S3 Unit 5: M1 S3 Unit 6: M3 S2 Unit 7: M4 S2 Unit 8: M3 S3	**Number Corner** May: Calendar Grid

Standard	Descriptor	Citations	
SMP Standards for Mathematical Process			
SMP.5	Use appropriate tools strategically.	**Bridges in Mathematics** Unit 1: M2 S5; M3 S1 Unit 3: M1 S2; M2 S4 Unit 4: M2 S4 Unit 6: M1 S5 Unit 7: M2 S2 Unit 8: M1 S3; M4 S2	**Number Corner** December: Calendar Collector January: Calendar Collector February: Calendar Collector April: Calendar Collector, Number Line
SMP.6	Attend to precision.	**Bridges in Mathematics** Unit 1: M3 S1 Unit 2: M4 S2 Unit 3: M3 S4 Unit 4: M1 S6; M4 S1 Unit 5: M3 S3; M4 S2 Unit 6: M1 S4 Unit 7: M2 S4; M4 S4 Unit 8: M1 S1; M1 S2; M4 S4	**Number Corner** November: Calendar Collector, Computational Fluency December: Computational Fluency January: Number Line February: Number Line March: Number Line May: Number Line
SMP.7	Look for and make use of structure.	**Bridges in Mathematics** Unit 1: M1 S1; M1 S2; M2 S1; M2 S3; M3 S5 Unit 2: M2 S2; M3 S4 Unit 3: M2 S2 Unit 4: M1 S2 Unit 8: M1 S3; M3 S6; M4 S4	**Number Corner** September: Calendar Grid, Number Line October: Calendar Grid, Number Line November: Calendar Grid, Number Line December: Calendar Grid, Number Line January: Calendar Grid, Number Line February: Calendar Grid, Number Line March: Calendar Grid, Number Line April: Solving Problems May: Computational Fluency
SMP.8	Look for and express regularity in repeated reasoning.	**Bridges in Mathematics** Unit 1: M1 S4 Unit 2: M2 S4; M3 S2 Unit 3: M4 S1 Unit 4: M3 S2 Unit 5: M1 S2 Unit 6: M3 S3 Unit 7: M3 S4 Unit 8: M1 S1; M2 S5	**Number Corner** November: Number Line December: Solving Problems January: Computational Fluency February: Computational Fluency March: Calendar Grid, Calendar Collector, Computational Fluency April: Computational Fluency May: Calendar Grid, Calendar Collector

3 Operations and Algebraic Thinking

Standard	Descriptor	Citations	
3.OA.A Represent and solve problems involving multiplication and division.			
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. For example, describe a context in which a total number of objects can be expressed as 5 × 7.	**Bridges in Mathematics** Unit 2: M1 S1; M1 S2; M1 S3; M1 S5; M2 S1; M2 S3; M2 S4; M2 S5; M3 S2; M3 S3; M3 S4; M4 S3 Unit 5: M1 S1; M1 S2; M1 S6	**Number Corner** September: Calendar Grid October: Computational Fluency November: Computational Fluency
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. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.	**Bridges in Mathematics** Unit 5: M1 S2; M1 S3; M1 S4; M1 S6; M2 S1; M2 S2; M3 S1; M3 S2	**Number Corner** May: Solving Problems

Standard	Descriptor	Citations	
3.OA.A Represent and solve problems involving multiplication and division.			
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.	**Bridges in Mathematics** Unit 2: M1 S1; M1 S2; M1 S3; M1 S4; M1 S5; M1 S6; M3 S1; M3 S2 Unit 5: M1 S3; M1 S4; M2 S1; M2 S2 Unit 7: M2 S1; M2 S2	**Number Corner** September: Calendar Grid November: Solving Problems
3.OA.A.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = ■ ÷ 3, 6 × 6 = ?	**Bridges in Mathematics** Unit 5: M2 S1; M2 S3; M3 S1	**Number Corner** November: Solving Problems April: Solving Problems May: Solving Problems

Standard	Descriptor	Citations	
3.OA.B Understand properties of multiplication and the relationship between multiplication and division.			
3.OA.B.5	Apply properties of operations as strategies to multiply and divide. Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30 (Associative property of multiplication) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8× (5 + 2) = (8 × 5) + (8 × 2) which leads to 40 + 16 = 56. (Distributive property)	**Bridges in Mathematics** Unit 7: M1 S3; M1 S4; M2 S1; M2 S2; M2 S3; M2 S4; M2 S5	**Number Corner** November: Computational Fluency December: Solving Problems April: Computational Fluency, Solving Problems May: Computational Fluency
3.OA.B.6	Understand division as unknown-factor problem. For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.	**Bridges in Mathematics** Unit 5: M1 S5; M1 S6; M2 S1; M2 S2; M2 S3; M3 S4	**Number Corner** February: Computational Fluency April: Computational Fluency, Solving Problems May: Computational Fluency
3.OA.C Multiply and divide within 100.			
3.OA.C.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	**Bridges in Mathematics** Unit 2: M2 S3; M2 S4; M2 S5; M3 S3; M3 S4; M4 S2; M4 S3 Unit 5: M2 S4; M3 S1; M3 S2; M3 S3; M3 S4	**Number Corner** February: Computational Fluency March: Computational Fluency April: Computational Fluency May: Calendar Collector, Computational Fluency

Standard	Descriptor	Citations	
3.OA.D Solve problems involving the four operations, and identify and explain patterns in arithmetic.			
3.OA.D.8	Solve two-step word problems using the four operations. 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.	**Bridges in Mathematics** Unit 1: M4 S1; M4 S2 Unit 2: M4 S2 Unit 3: M3 S4 Unit 4: M2 S2; M2 S3 Unit 7: M1 S1; M1 S2 Unit 8: M4 S2	**Number Corner** October: Number Line November: Number Line January: Solving Problems
3.OA.D.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even and explain why 4 times a number can be decomposed into two equal addends.	**Bridges in Mathematics** Unit 1: M1 S3; M1 S4; M1 S5; M2 S2; M3 S3; M3 S4 Unit 2: M2 S2; M3 S3; M3 S4 Unit 7: M1 S5 Unit 8: M2 S1	**Number Corner** September: Number Line December: Computational Fluency January: Computational Fluency February: Computational Fluency March: Computational Fluency April: Computational Fluency May: Calendar Collector

3 Number and Operations in Base Ten

Standard	Descriptor	Citations	
3.NBT.A Use place value understanding and properties of operations to perform multidigit arithmetic.			
3.NBT.A.1	Use place value understanding to round whole numbers to the nearest 10 or 100.	**Bridges in Mathematics** Unit 3: M1 S2; M1 S3; M1 S4; M3 S1; M3 S2; M3 S3; M3 S4	**Number Corner** November: Number Line December: Number Line
3.NBT.A.2	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	**Bridges in Mathematics** Unit 1: M2 S5; M3 S2; M3 S3; M4 S2; M4 S4 Unit 3: M1 S5; M2 S1; M2 S2; M2 S3; M2 S4; M2 S5; M3 S1; M3 S3; M4 S1; M4 S2; M4 S3; M4 S4 Unit 4: M2 S1; M2 S2	**Number Corner** September: Solving Problems October: Solving Problems
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.	**Bridges in Mathematics** Unit 7: M1 S1; M1 S5; M2 S1; M2 S2; M2 S3; M2 S4; M2 S5	

3 Number and Operations: Fractions

Standard	Descriptor	Citations	
3.NF.A Develop understanding of fractions as numbers.			
3.NF.A.1	Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction *a*/*b* as the quantity formed by a parts of size 1/*b*.	**Bridges in Mathematics** Unit 4: M3 S1; M3 S2; M3 S3; M3 S4; M4 S2 Unit 7: M3 S1; M3 S2; M3 S3; M3 S4; M3 S5; M3 S6; M4 S1	**Number Corner** October: Calendar Collector November: Calendar Collector December: Calendar Grid February: Calendar Collector April: Calendar Collector
	3.NF.A.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram.		
3.NF.A.2a	Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/*b* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line.	**Bridges in Mathematics** Unit 4: M3 S4; M4 S1; M4 S2 Unit 7: M3 S1; M3 S2; M3 S3; M3 S4; M3 S5; M4 S1	**Number Corner** January: Number Line February: Number Line March: Number Line April: Calendar Grid, Number Line May: Number Line
3.NF.A.2b	Represent a fraction *a*/*b* on a number line diagram by marking off a lengths 1/*b* from 0. Recognize that the resulting interval has size *a*/*b* and that its endpoint locates the number *a*/*b* on the number line.	**Bridges in Mathematics** Unit 4: M3 S5 Unit 7: M3 S1; M3 S2; M3 S3; M3 S4; M3 S5; M4 S1	**Number Corner** November: Calendar Collector January: Number Line February: Number Line March: Number Line May: Number Line

Standard	Descriptor	Citations	
3.NF.A Develop understanding of fractions as numbers.			
	3.NF.A.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.		
3.NF.A.3a	Represent two fractions as equivalent (equal) if they are the same size, or the same point on the number line.	**Bridges in Mathematics** Unit 7: M3 S1; M3 S2; M3 S3; M3 S5; M4 S1	**Number Corner** December: Calendar Grid January: Calendar Grid, Number Line April: Calendar Grid May: Number Line
3.NF.A.3b	Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3. Explain why the fractions are equivalent, e.g., by using a visual fraction model.	**Bridges in Mathematics** Unit 6: M4 S2; M4 S3 Unit 7: M3 S1; M3 S5; M3 S6; M4 S1; M4 S3	**Number Corner** December: Calendar Grid January: Calendar Grid April: Calendar Grid, Calendar Collector May: Calendar Grid, Number Line
3.NF.A.3c	Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.	**Bridges in Mathematics** Unit 4: M3 S3	**Number Corner** December: Calendar Grid February: Number Line March: Number Line April: Calendar Collector May: Calendar Grid, Number Line
3.NF.A.3d	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. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	**Bridges in Mathematics** Unit 4: M3 S2; M3 S5 Unit 7: M3 S1	**Number Corner** January: Calendar Grid February: Number Line March: Number Line

3 Measurement and Data

Standard	Descriptor	Citations	
3.MD.A Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.			
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 diagram.	**Bridges in Mathematics** Unit 4: M2 S4; M2 S5 Unit 8: M2 S1; M3 S1; M3 S2; M3 S5; M4 S2	**Number Corner** January: Calendar Collector March: Calendar Grid
3.MD.A.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). 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.	**Bridges in Mathematics** Unit 4: M1 S3; M1 S4; M1 S5; M1 S6; M2 S1; M2 S2; M2 S3 Unit 8: M1 S2; M1 S4; M1 S5; M3 S2; M3 S3; M3 S4; M3 S5	**Number Corner** October: Calendar Collector December: Calendar Collector

Standard	Descriptor	Citations	
3.MD.B Represent and interpret data.			
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.	**Bridges in Mathematics** Unit 2: M3 S5; M4 S1; M4 S2 Unit 8: M1 S5; M2 S4; M3 S3	**Number Corner** September: Calendar Collector February: Solving Problems March: Calendar Grid May: Calendar Collector
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, or quarters.	**Bridges in Mathematics** Unit 4: M4 S1; M4 S2; M4 S3 Unit 8: M1 S4; M2 S3; M3 S5	

Standard	Descriptor	Citations	
3.MD.C Geometric measurement: understand concepts of area and relate area to multiplication and to addition.			
	3.MD.C.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.		
3.MD.C.5a	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.	**Bridges in Mathematics** Unit 5: M4 S1 Unit 6: M4 S1	**Number Corner** February: Calendar Grid
3.MD.C.5b	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.	**Bridges in Mathematics** Unit 5: M4 S1; M4 S2; M4 S3	
3.MD.C.6	Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	**Bridges in Mathematics** Unit 5: M4 S1; M4 S2; M4 S3; M4 S4 Unit 6: M3 S5 Unit 8: M1 S2	**Number Corner** February: Calendar Grid March: Calendar Collector
	3.MD.C.7 Relate area to the operations of multiplication and addition.		
3.MD.C.7a	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.	**Bridges in Mathematics** Unit 5: M4 S1; M4 S4 Unit 6: M3 S1; M3 S5 Unit 7: M2 S2; M2 S5	**Number Corner** November: Calendar Grid February: Calendar Grid May: Calendar Grid
3.MD.C.7b	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 math reasoning.	**Bridges in Mathematics** Unit 5: M3 S3; M4 S4; M4 S5 Unit 6: M3 S1; M3 S3; M3 S4 Unit 7: M1 S5; M2 S2; M2 S4 Unit 8: M1 S2; M1 S4; M4 S3	

Standard	Descriptor	Citations	
3.MD.C Geometric measurement: understand concepts of area and relate area to multiplication and to addition.			
	3.MD.C.7 Relate area to the operations of multiplication and addition.		
3.MD.C.7c	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.	**Bridges in Mathematics** Unit 5: M4 S5 Unit 7: M2 S1; M2 S2; M2 S3; M2 S4; M2 S5	
3.MD.C.7d	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.	**Bridges in Mathematics** Unit 5: M4 S5 Unit 6: M3 S4 Unit 8: M4 S3	**Number Corner** March: Calendar Collector, Solving Problems May: Calendar Grid
3.MD.D Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.			
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.	**Bridges in Mathematics** Unit 6: M3 S1; M3 S2; M3 S3; M3 S4; M3 S5 Unit 8: M2 S1; M4 S3	**Number Corner** February: Calendar Grid March: Calendar Collector, Solving Problems

3 Geometry

Standard	Descriptor	Citations	
3.G.A Reason with shapes and their attributes.			
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.	**Bridges in Mathematics** Unit 6: M1 S1; M1 S2; M1 S3; M1 S4; M1 S5; M2 S1; M2 S2; M2 S3; M2 S4; M2 S5; M2 S6 Unit 8: M2 S2; M2 S5; M4 S3	**Number Corner** October: Calendar Grid
3.G.A.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.	**Bridges in Mathematics** Unit 4: M3 S1; M3 S2; M3 S3 Unit 6: M4 S1; M4 S3 Unit 7: M4 S2; M4 S3 Unit 8: M2 S1	**Number Corner** May: Calendar Grid