bridges in mathematics

GRADE 1

Bridges & Number Corner Third Edition

CORRELATIONS

Virginia Mathematics Standards of Learning

number corner

1 Number and Number Sense

Standard	Descriptor	Citations	
1.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 120. The student will:			
1.NS.1.a	Count forward orally by ones from 0 to 120 starting at any number between 0 and 120.	**Bridges in Mathematics** Unit 4: M1–S1, M1–S2; M2–S1, M2–S2	**Number Corner** February: Days in School, Number Path March: Number Path April: Computational Fluency
1.NS.1.b	Count backward orally by ones when given any number between 1 and 30.	**Bridges in Mathematics** Unit 2: M3–S4 Unit 4: M1–S5	**Number Corner** September: Number Path October: Number Path
		The grade K curriculum addresses 1.NS.1.b in the following sections:	
		Bridges in Mathematics Unit 4: M1–S1 Unit 6: M2–S2; M3–S3 Unit 8: M1–S2	
1.NS.1.c	Represent forward counting patterns when counting by groups of 5 and groups of 10 up to 120 using a variety of tools (e.g., objects, coins, 120 chart).	**Bridges in Mathematics** Unit 1: M1–S5; M3–S5 Unit 2: M4–S3 Unit 7: M2–S4, M4–S4, M4–S5	**Number Corner** January: Number Path May: Number Path
1.NS.1.d	Represent forward counting patterns when counting by groups of 2 up to at least 30 using a variety of tools (e.g., beaded number strings, number paths [a prelude to number lines], 120 chart).	**Bridges in Mathematics** Unit 1: M1–S5 Unit 5: M4–S4, M4–S5 Unit 7: M1–S1	**Number Corner** September: Number Path November: Calendar Grid December: Computational Fluency April: Computational Fluency

Standard	Descriptor	Citations	
1.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 120. The student will:			
1.NS.1.e	Group a collection of up to 120 objects into tens and ones, and count to determine the total (e.g., 5 groups of ten and 6 ones is equal to 56 total objects).	**Bridges in Mathematics** Unit 7: M1–S1, M1–S2, M1–S3, M1–S4; M2–S5	**Number Corner** September: Computational Fluency October: Calendar Collector February: Calendar Collector
1.NS.1.f	Identify a penny, nickel, and dime by their attributes and describe the number of pennies equivalent to a nickel and a dime.	**Bridges in Mathematics** Unit 1: M3–S3 Unit 2: M4–S4, M4–S5 Unit 7: M4–S1, M4–S2	**Number Corner** September: Computational Fluency January: Calendar Collector March: Calendar Collector May: Calendar Collector
1.NS.1.g	Count by ones, fives, or tens to determine the value of a collection of like coins (pennies, nickels, or dimes), whose total value is 100 cents or less.	**Bridges in Mathematics** Unit 1: M3–S3 Unit 2: M4–S4, M4–S5 Unit 7: M4–S1, M4–S2	**Number Corner** January: Calendar Collector March: Calendar Collector May: Calendar Collector

Standard	Descriptor	Citations	
1.NS.2 The student will represent, compare, and order quantities up to 120. The student will:			
1.NS.2.a	Read and write numerals 0-120 in sequence and out of sequence.	**Bridges in Mathematics** Unit 1: M2–S4, M2–S5 Unit 4: M4–S1 Unit 7: M1–S1, M1–S2	**Number Corner** February: Days in School, Number Path March: Days in School, Number Path
1.NS.2.b	Estimate the number of objects (up to 120) in a given collection and justify the reasonableness of an answer.	**Bridges in Mathematics** Unit 7: M2–S5; M4–S1	**Number Corner** September: Calendar Collector October: Calendar Collector January: Calendar Collector February: Calendar Collector April: Calendar Collector
		The grade K curriculum addresses 1.NS.2.b in the following sections:	
		Bridges in Mathematics Unit 8: M2–S1	
1.NS.2.c	Create a concrete or pictorial representation of a number using tens and ones and write the corresponding numeral up to 120 (e.g., 47 can be represented as 47 ones or it can be grouped into 4 tens with 7 ones left over).	**Bridges in Mathematics** Unit 3: M3–S1, M3–S2 Unit 7: M1–S1	**Number Corner** September: Calendar Grid, Computational Fluency, Number Path February: Days in School March: Days in School
1.NS.2.d	Describe the number of groups of tens and ones when given a two-digit number and justify reasoning.	**Bridges in Mathematics** Unit 7: M1–S1, M1–S2, M1–S3	**Number Corner** September: Calendar Grid, Computational Fluency, Number Path February: Days in School March: Days in School

Standard	Descriptor	Citations	
1.NS.2 The student will represent, compare, and order quantities up to 120. The student will:			
1.NS.2.e	Compare two numbers between 0 and 120 represented pictorially or with concrete objects using the terms greater than, less than, or equal to.	**Bridges in Mathematics** Unit 2: M4–S4 Unit 3: M2–S6; M4–S3 Unit 4: M4–S5 Unit 5: M4–S2, M4–S3 Unit 7: M1–S4	**Number Corner** October: Number Path
1.NS.2.f	Order three sets, each set containing up to 120 objects, from least to greatest, and greatest to least.	** Denotes ordering length, in inches:*	
		Bridges in Mathematics Unit 4: M4–S5, Unit 5: M4–S1*, M4–S2*, M4–S3* Unit 7: M1–S1; M4–S4* Unit 8: M4–S2	**Number Corner** January: Calendar Collector
		The grade K curriculum addresses 1.NS.2.f in the following section:	
		Bridges in Mathematics Unit 3: M4–S1	
1.NS.3 The student will use mathematical reasoning and justification to solve contextual problems that involve partitioning models into two and four equal-sized parts. The student will:			
1.NS.3.a	Represent equal shares of a whole with two or four sharers, when given a contextual problem.	**Bridges in Mathematics** Unit 3: M1–S3 Unit 6: M3–S3, M3–S4 Unit 7: M4–S1	**Number Corner** November: Calendar Grid
		The grade 2 curriculum addresses 1.NS.3.a in the following sections:	
		Bridges in Mathematics Unit 6: M4–S2, M4–S3, M4–S4	

Standard	Descriptor	Citations	
1.NS.3 The student will use mathematical reasoning and justification to solve contextual problems that involve partitioning models into two and four equal-sized parts. The student will:			
1.NS.3.b	Represent and name halves and fourths of a whole, using a region/area model (e.g., pie pieces, pattern blocks, paper folding, drawings) and a set model (e.g., eggs, marbles, counters) limited to two or four items.	**Bridges in Mathematics** Unit 2: M4–S1 Unit 6: M3–S3, M3–S4, M3–S5 Unit 8: M3–S1	**Number Corner** November: Calendar Grid December: Calendar Collector May: Calendar Collector
1.NS.3.c	Describe and justify how shares are equal pieces or equal parts of the whole (limited to halves, fourths) when given a contextual problem.	**Bridges in Mathematics** Unit 3: M1–S3 Unit 6: M3–S3, M3–S4 Unit 7: M4–S1	**Number Corner** November: Calendar Grid
		The grade 2 curriculum addresses 1.NS.3.c in the following sections:	
		Bridges in Mathematics Unit 6: M4–S2, M4–S3, M4–S4	

1 Computation and Estimation

Standard	Descriptor	Citations	
1.CE.1	The student will recall with automaticity addition and subtraction facts within 10 and represent, solve, and justify solutions to single-step problems, including those in context, using addition and subtraction with whole numbers within 20. The student will:		
1.CE.1.a	Recognize and describe with fluency part-part-whole relationships for numbers up to 10 in a variety of configurations.	**Bridges in Mathematics** Unit 1: M2–S2, M2–S3; M3–S1, M3–S2 Unit 2: M3–S1 Unit 3: M2–S3	**Number Corner** October: Calendar Grid March: Computational Fluency
1.CE.1.b	Demonstrate fluency with addition and subtraction within 10 by applying reasoning strategies (e.g., count on/count back, one more/one less, doubles, make ten).	**Bridges in Mathematics** Unit 1: M2–S2, M2–S3; M4–S4 Unit 2: M1–S4; M2–S4; M3–S3, M3–S4	**Number Corner** November: Computational Fluency
1.CE.1.c	Recall with automaticity addition and subtraction facts within 10.	**Bridges in Mathematics** Unit 2: M1–S1 (Assessment); M2–S4 Unit 3: M1–S2 (Assessment) Unit 4: M3–S5 (Assessment) Unit 5: M1–S3 (Assessment) Unit 6: M1–S2	**Number Corner** October: Days in School March: Computational Fluency
1.CE.1.d	Investigate, recognize, and describe part-part-whole relationships for numbers up to 20 in a variety of configurations (e.g., beaded racks, double ten frames).	**Bridges in Mathematics** Unit 1: M3–S2 Unit 2: M2–S5 Unit 3: M2–S3; M3–S1	**Number Corner** September: Computational Fluency October: Calendar Grid, Days in School December: Computational Fluency

Standard	Descriptor	Citations	
1.CE.1 The student will recall with automaticity addition and subtraction facts within 10 and represent, solve, and justify solutions to single-step problems, including those in context, using addition and subtraction with whole numbers within 20. The student will:			
1.CE.1.e	Solve addition and subtraction problems within 20 using various strategies (e.g., inverse relationships: if 9 + 3 = 12 then 12 - 3 = 9; decomposition using known sums/differences: 9 + 7 can be thought of as 9 decomposed into 2 and 7, then use doubles, 7 + 7 = 14; 14 + 2 = 16 or decompose the 7 into 1 and 6; make a ten: 1 + 9 = 10; 10 + 6 = 16).	**Bridges in Mathematics** Unit 3: M3–S2, M3–S3. M3–S4, M3–S5 Unit 5: M2–S1, M2–S2, M2–S3, M2–S4	
1.CE.1.f	Represent, solve, and justify solutions to single-step addition and subtraction problems (join, separate, and part-part-whole) within 20, including those in context, using words, objects, drawings, or numbers.	**Bridges in Mathematics** Unit 3: M2–S4; M3–S2, M3–S3 Unit 5: M1–S2, M1–S5, M3–S1; M3–S2, M3–S4	
1.CE.1.g	Determine the unknown whole number that will result in a sum or difference of 10 or 20 (e.g., 14 – __ = 10 or 15 + __ = 20).	**Bridges in Mathematics** Unit 1: M3–S1 Unit 2: M2–S5; M3–S2 (Home Connection) Unit 3: M2–S5 (Home Connection) Unit 6: M1–S2, M1–S5	**Number Corner** September: Calendar Grid
		The grade 2 curriculum addresses 1.CE.1.g in the following sections:	
		Bridges in Mathematics Unit 1: M2–S4	

Standard	Descriptor	Citations	
1.CE.1	The student will recall with automaticity addition and subtraction facts within 10 and represent, solve, and justify solutions to single-step problems, including those in context, using addition and subtraction with whole numbers within 20. The student will:		
1.CE.1.h	Identify and use (+) as a symbol for addition and (-) as a symbol for subtraction.	**Bridges in Mathematics** Unit 1: M2–S2, M2–S3, M2–S5, M4–S1 Unit 2: M1–S5, M2–S2, M2–S3	**Number Corner** January: Calendar Grid
1.CE.1.i	Describe the equal symbol (=) as a balance representing an equivalent relationship between expressions on either side of the equal symbol (e.g., 6 and 1 is the same as 4 and 3; 6 + 1 is balanced with 4 + 3; 6 + 1 = 4 + 3).	**Bridges in Mathematics** Unit 2: M2–S5 Unit 3: M4–S1, M4–S2 Unit 5: M2–S1; M3–S5 (Work Place 5C) Unit 6: M3–S2	**Number Corner** February: Computational Fluency March: Computational Fluency
1.CE.1.j	Use concrete materials to model, identify, and justify when two expressions are not equal (e.g., 10 - 3 is not equal to 3 + 5).	**Bridges in Mathematics** Unit 3: M4–S2	
1.CE.1.k	Use concrete materials to model an equation that represents the relationship of two expressions of equal value.	**Bridges in Mathematics** Unit 3: M4–S1	
1.CE.1.l	Write an equation that could be used to represent the solution to an oral, written, or picture problem.	**Bridges in Mathematics** Unit 5: M1–S2, M1–S5; M3–S1, M3–S2, M3–S4	**Number Corner** October: Calendar Grid April: Calendar Grid May: Calendar Grid

1 Measurement and Geometry

Standard	Descriptor	Citations	
1.MG.1 The student will reason mathematically using nonstandard units to measure and compare objects by length, weight, and volume. The student will:			
	1.MG.1.a Use nonstandard units to measure the:		
1.MG.1.a.i	lengths of two objects (units laid end to end with no gaps or overlaps) and compare the measurements using the terms longer/shorter, taller/shorter, or the same as;	**Bridges in Mathematics** Unit 1: M4–S2, M4–S3 Unit 4: M4–S2, M4–S3, M4–S4 Unit 8: M4–S2, M4–S5	**Number Corner** April: Calendar Collector
1.MG.1.a.ii	weights of two objects (using a balance scale or a pan scale) and compare the measurements using the terms lighter, heavier, or the same as; and	*The grade K curriculum addresses 1.MG.1.a.ii in the following sections:* **Bridges in Mathematics** Unit 7: M1–S1, M1–S2, M1–S3	
1.MG.1.a.iii	volumes of two containers and compare the measurements using the terms more, less, or the same as.	*This standard is beyond the scope of the program.*	
1.MG.1.b	Measure the length, weight, or volume of the same object or container with two different units and describe how and why the measurements differ.	*The grade 2 curriculum addresses 1.MG.1.b in the following sections* **Bridges in Mathematics** Unit 4: M1–S5, M1–S6; M2–S1, M2–S2 Unit 7: M1–S1, M1–S2, M1–S3, M1–S4	

Standard	Descriptor	Citations	
1.MG.2	The student will describe, sort, draw, and name plane figures (circles, triangles, squares, and rectangles), and compose larger plane figures by combining simple plane figures. The student will:		
1.MG.2.a	Describe triangles, squares, and rectangles using the terms sides, vertices, and angles. Describe a circle using terms such as round and curved.	*Sessions that include hexagon, rhombuses, trapezoids, or polydrons also include at least one of the shapes listed in the standard.*	
		Bridges in Mathematics Unit 6: M1–S1, M1–S2, M1–S3, M1–S4, M1–S5; M2–S4, M2–S5	**Number Corner** February: Calendar Grid
1.MG.2.b	Sort plane figures based on their characteristics (e.g., number of sides, vertices, angles, curved).	**Bridges in Mathematics** Unit 6: M1–S1, M1–S2, M1–S3, M1–S4, M1–S5	**Number Corner** October: Calendar Collector
		The grade K curriculum addresses 1.MG.2.b in the following section:	
		Bridges in Mathematics Unit 5: M2–S2, M2–S3	
1.MG.2.c	Draw and name the plane figure (circle, square, rectangle, triangle) when given information about the number of sides, vertices, and angles.	**Bridges in Mathematics** Unit 6: M4–S2 (square, rectangle, rhombus, trapezoid), M4–S3	
1.MG.2.d	Identify, name, and describe representations of circles, squares, rectangles, and triangles, regardless of orientation, in different environments and explain reasoning.	**Bridges in Mathematics** Unit 6: M1–S1, M1–S2, M1–S5; M2–S5; M4–S2, M4–S3	**Number Corner** October: Calendar Collector February: Calendar Grid

Standard	Descriptor	Citations	
1.MG.2	The student will describe, sort, draw, and name plane figures (circles, triangles, squares, and rectangles), and compose larger plane figures by combining simple plane figures. The student will:		
1.MG.2.e	Recognize and name the angles found in rectangles and squares as right angles.	**Bridges in Mathematics** Unit 1: M1–S3 Unit 6: M1–S1, M1–S2, M1–S5	**Number Corner** February: Calendar Grid
		The grade 2 curriculum addresses 1.MG.2.e in the following section:	
		Bridges in Mathematics Unit 6: M1–S2, M1–S3, M1–S5	
1.MG.2.f	Compose larger plane figures by combining two or three simple plane figures (triangles, squares, and/or rectangles).	**Bridges in Mathematics** Unit 1: M1–S3 Unit 2: M4–S2 Unit 6: M1–S3, M1–S4, M1–S5 (Assessment); M3–S2 (M3–S4 and M3–S5 include circles)	**Number Corner** October: Calendar Collector
1.MG.3	The student will demonstrate an understanding of the concept of passage of time (to the nearest hour and half-hour) and the calendar. The student will:		
1.MG.3.a	Identify different tools to measure time including clocks (analog and digital) and calendar.	**Bridges in Mathematics** Unit 8: M1–S2, M1–S3	**Number Corner** September: Calendar Grid, Calendar Collector, Days in School November: Calendar Grid, Calendar Collector December: Calendar Collector
1.MG.3.b	Describe the units of time represented on a clock as minutes and hours.	**Bridges in Mathematics** Unit 8: M1–S1, M1–S2, M1–S3, M1–S4, M1–S5	**Number Corner** November: Calendar Collector December: Calendar Collector March: Calendar Grid
1.MG.3.c	Tell time to the hour and half-hour, using analog and digital clocks.	**Bridges in Mathematics** Unit 8: M1–S1, M1–S2, M1–S3, M1–S4, M1–S5	**Number Corner** November: Calendar Collector December: Calendar Collector March: Calendar Grid

Standard	Descriptor	Citations	
1.MG.3	The student will demonstrate an understanding of the concept of passage of time (to the nearest hour and half-hour) and the calendar. The student will:		
1.MG.3.d	Describe the location of the hour hand relative to time to the hour and half-hour on an analog clock.	**Bridges in Mathematics** Unit 8: M1–S1, M1–S2, M1–S3, M1–S4	**Number Corner** November: Calendar Collector December: Calendar Collector March: Calendar Grid
1.MG.3.e	Describe the location of the minute hand relative to time to the hour and half-hour on an analog clock.	**Bridges in Mathematics** Unit 8: M1–S1, M1–S2, M1–S3, M1–S4	**Number Corner** March: Calendar Grid
1.MG.3.f	Match the time shown on a digital clock to an analog clock to the hour and half-hour.	**Bridges in Mathematics** Unit 8: M1–S1, M1–S2, M1–S3	**Number Corner** March: Calendar Grid
1.MG.3.g	Match the time shown on a digital clock to an analog clock to the hour and half-hour.	**Number Corner** September: Calendar Grid October: Calendar Grid November: Calendar Grid December: Calendar Grid	**Number Corner (cont.)** January: Calendar Grid February: Calendar Grid March: Calendar Grid April: Calendar Grid

Standard	Descriptor	Citations	
1.MG.3	The student will demonstrate an understanding of the concept of passage of time (to the nearest hour and half-hour) and the calendar. The student will:		
1.MG.3.h	Use ordinal numbers first through tenth to describe the relative position of specific days/dates (e.g., What is the first Monday in October? What day of the week is May 6th?).	**Bridges in Mathematics** Unit 7: M2–S1	**Number Corner** November: Calendar Grid December: Calendar Grid January: Calendar Grid February: Calendar Grid March: Calendar Grid April: Calendar Grid May: Calendar Grid
1.MG.3.i	Determine the day/date before and after a given day/date (e.g., Today is the 8th, so yesterday was the ?), and a date that is a specific number of days/weeks in the past or future (e.g., Tim's birthday is in 10 days, what will be the date of his birthday?).	**Number Corner** September: Calendar Grid October: Calendar Grid November: Calendar Grid December: Calendar Grid January: Calendar Grid February: Calendar Grid March: Calendar Grid April: Calendar Grid	

1 Probability and Statistics

Standard	Descriptor	Citations	
1.PS.1	The student will apply the data cycle (pose questions; collect or acquire data; organize and represent data; and analyze data and communicate results) with a focus on object graphs, picture graphs, and tables. The student will:		
1.PS.1.a	Sort and classify concrete objects into appropriate subsets (categories) based on one or two attributes, such as size, shape, color, and/or thickness (e.g., sort a set of objects that are both red and thick).	**Bridges in Mathematics** Unit 1: M3–S3 Unit 6: M1–S4; M2–S2, M2–S5 Unit 8: M3–S4	**Number Corner** October: Calendar Collector January: Calendar Collector March: Calendar Collector
1.PS.1.b	Describe and label attributes of a set of objects that has been sorted.	**Bridges in Mathematics** Unit 1: M3–S3 Unit 6: M1–S2, M1–S5; M2–S2, M2–S5 (Assessment)	
1.PS.1.c	Pose questions, given a predetermined context, that require the collection of data (limited to 25 or fewer data points for no more than four categories).	**Bridges in Mathematics** Unit 1: M1–S2; M2–S4: M3–S3 Unit 4: M4–S1 Unit 6: M4–S4 Unit 8: M3–S3, M3–S4, M3–S6	
1.PS.1.d	Determine the data needed to answer a posed question and collect the data using various methods (e.g., counting objects, drawing pictures, tallying).	**Bridges in Mathematics** Unit 1: M1–S2; M3–S3 Unit 4: M4–S1 Unit 6: M4–S4 Unit 8: M3–S5	**Number Corner** September: Calendar Collector October: Calendar Collector March: Calendar Collector

Standard	Descriptor	Citations	
1.PS.1 The student will apply the data cycle (pose questions; collect or acquire data; organize and represent data; and analyze data and communicate results) with a focus on object graphs, picture graphs, and tables. The student will:			
1.PS.1.e	Organize and represent a data set by sorting the collected data using various methods (e.g., tallying, T-charts).	**Bridges in Mathematics** Unit 6: M3–S4; M4–S4 Unit 8: M1–S1; M2–S3; M3–S4	**Number Corner** September: Calendar Collector October: Calendar Collector April: Calendar Collector
1.PS.1.f	Represent a data set (vertically or horizontally) using object graphs, picture graphs, and tables.	**Bridges in Mathematics** Unit 1: M1–S2; M3–S3 Unit 4: M4–S1	**Number Corner** September: Calendar Collector October: Calendar Collector January: Calendar Collector February: Calendar Collector March: Calendar Collector
	1.PS.1.g Analyze data represented in object graphs, picture graphs, and tables and communicate results:		
1.PS.1.g.i	ask and answer questions about the data represented in object graphs, picture graphs, and tables (e.g., total number of data points represented, how many in each category, how many more or less are in one category than another); and	**Bridges in Mathematics** Unit 1: M1–S2, M2–S4; M3–S3 Unit 4: M4–S1 Unit 6: M4–S4 Unit 8: M3–S3, M3–S4, M3–S6	
1.PS.1.g.ii	draw conclusions about the data and make predictions based on the data.	**Number Corner** September: Calendar Grid October: Calendar Grid November: Calendar Grid December: Calendar Grid	**Number Corner (cont.)** January: Calendar Grid February: Calendar Grid March: Calendar Grid April: Calendar Grid

1 Patterns, Functions, and Algebra

Standard	Descriptor	Citations	
1.PFA.1	The student will identify, describe, extend, create, and transfer repeating patterns and increasing patterns using various representations. The student will:		
1.PFA.1.a	Identify and describe repeating and increasing patterns.	**Bridges in Mathematics** Unit 1: M1–S5 Unit 2: M4–S2 Unit 6: M3–S2; M4–S3, M4–S4 Unit 7: M2–S1; M4–S3 Unit 8: M1–S4	
1.PFA.1.b	Analyze a repeating or increasing pattern and generalize the change to extend the pattern using objects, colors, movements, pictures, or geometric figures.	**Number Corner** September: Calendar Grid October: Calendar Grid November: Calendar Grid December: Calendar Grid	**Number Corner (cont.)** January: Calendar Grid February: Calendar Grid March: Calendar Grid April: Calendar Grid
1.PFA.1.c	Create a repeating or increasing pattern using objects, pictures, movements, colors, or geometric figures.	**Bridges in Mathematics** Unit 1: M1–S3 Unit 6: M3–S2 Unit 7: M2–S1, M2–S4	
		The grade K curriculum addresses 1.PFA.1.c in the following sections:	
		Bridges in Mathematics Unit 1: M1–S1, M1–S2, M1–S3, M1–S4	
1.PFA.1.d	Transfer a repeating or increasing pattern from one form to another.	*The grade 2 curriculum addresses 1.PFA.1.d in the following sections:*	
		Bridges in Mathematics Unit 4: M4–S1, M4–S2, M4–S3, M4–S4	