Mathematics Vertical Alignment, Prekindergarten – Grade 2

Age / Grade Level	Prekindergarten	Kindergarten	Grade 1	Grade 2
Standards	Texas Prekindergarten Guidelines	Texas Essential Knowledge and Skills (TEKS)	Texas Essential Knowledge and Skills (TEKS)	Texas Essential Knowledge and Skills (TEKS)
Domain / Content Area	V. Mathematics	Mathematics	Mathematics	Mathematics
Sub-Domains / Strands	A. Counting Skills B. Adding To/Taking Away Skills C. Geometry and Spatial Sense Skills D. Measurement Skills E. Classification Skills	1. Mathematical Process Standards 2. Number and Operation 3. Algebraic Reasoning 4. Geometry and Measurement 5. Data Analysis 6. Personal Financial Literacy	1. Mathematical Process Standards 2. Number and Operation 3. Algebraic Reasoning 4. Geometry and Measurement 5. Data Analysis 6. Personal Financial Literacy	1. Mathematical Process Standards 2. Number and Operation 3. Algebraic Reasoning 4. Geometry and Measurement 5. Data Analysis 6. Personal Financial Literacy

Mathematical Process Standards

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
No standard present in vertical progression	(A) apply mathematics to problems arising in everyday life, society, and the workplace.	(A) apply mathematics to problems arising in everyday life, society, and the workplace.	(A) apply mathematics to problems arising in everyday life, society, and the workplace.
No standard present in vertical progression	(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.	(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.	(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.
No standard present in vertical progression	(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.	(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.	(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.
No standard present in vertical progression	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.	(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.
No standard present in vertical progression	(E) create and use representations to organize, record, and communicate mathematical ideas.	(E) create and use representations to organize, record, and communicate mathematical ideas.	(E) create and use representations to organize, record, and communicate mathematical ideas.
No standard present in vertical progression	(F) analyze mathematical relationships to connect and communicate mathematical ideas.	(F) analyze mathematical relationships to connect and communicate mathematical ideas.	(F) analyze mathematical relationships to connect and communicate mathematical ideas.
No standard present in vertical progression	(G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.	(G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.	(G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

Counting and Recognizing Whole Numbers

Prekindergarten	Kindergarten	Grade 1	Grade 2
V. Counting Skills	K(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system. The student is expected to:	1(2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:	2(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:
V.A.1. Child knows that objects, or parts of an object, can be counted.	No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression
V.A.3. Child counts 1-10 items, with one count per item.	K(2)(A) count forward and backward to at least 20 with and without objects.	No standard present in vertical progression	No standard present in vertical progression
V.A.4. Child demonstrates that the order of the counting sequence is always the same, regardless of what is counted.	No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression
V.A.6. Child demonstrates understanding that when counting, the items can be chosen in any order.	No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression
V.A.9. Child recognizes one-digit numerals, 0-9.	K(2)(B) read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures.	No standard present in vertical progression	No standard present in vertical progression
V.A.5. Child counts up to 10 items and demonstrates that the last count indicates how many items were counted.	K(2)(C) count a set of objects up to at least 20 and demonstrate that the last number said tells the number of objects in the set regardless of their arrangement or order.	No standard present in vertical progression	No standard present in vertical progression
V.A.8. Child verbally identifies, without counting, the number of objects from 1 to 5.	K(2)(D) recognize instantly the quantity of a small group of objects in organized and random arrangements	1(2)(A) recognize instantly the quantity of structured arrangements.	No standard present in vertical progression
No standard present in vertical progression	K(2)(E) generate a set using concrete and pictorial models that represents a number that is more than, less than, and equal to a given number up to 20	No standard present in vertical progression	No standard present in vertical progression
No standard present in vertical progression	K(2)(F) generate a number that is one more than or one less than another number up to at least 20.	1(2)(D) generate a number that is greater than or less than a given whole number up to 120.	2(2)(C) generate a number that is greater than or less than a given whole number up to 1,200.
V.A.7. Child uses verbal ordinal terms.	No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression

Comparing and Ordering Numbers

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	K(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system. The student is expected to:	1(2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:	2(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:
No standard present in vertical progression	K(2)(G) compare sets of objects up to at least 20 in each set using comparative language.	1(2)(E) use place value to compare whole numbers up to 120 using comparative language.	2(2)(D) use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>, <, or =);
No standard present in vertical progression	K(2)(H) use comparative language to describe two numbers up to 20 presented as written numerals.	1(2)(E) use place value to compare whole numbers up to 120 using comparative language.	2(2)(D) use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>, <, or =);
No standard present in vertical progression	No standard present in vertical progression	1(2)(F) order whole numbers up to 120 using place value and open number lines.	2(2)(D) use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>, <, or =);
No standard present in vertical progression	No standard present in vertical progression	1(2)(G) represent the comparison of two numbers to 100 using the symbols >, <, or =.	2(2)(D) use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>, <, or =);

Representing and Relating Numbers Using Number Lines

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	No standard present in vertical progression	1(2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:	2(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	1(2)(F) order whole numbers up to 120 using place value and open number lines.	2(2)(E) locate the position of a given whole number on an open number line.
			2(2)(F) name the whole number that corresponds to a specific point on a number line.

Composing and Decomposing Numbers: Place Value

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	K(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system. The student is expected to:	1(2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:	2(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:
No standard present in vertical progression	K(2)(I) compose and decompose numbers up to 10 with objects and pictures.	1(2)(B) use concrete and pictorial models to compose and decompose numbers up to 120 in more than one way as so many hundreds, so many tens, and so many ones.	2(2)(A) use concrete and pictorial models to compose and decompose numbers up to 1,200 in more than one way as a sum of so many thousands, hundreds, tens, and ones.
No standard present in vertical progression	No standard present in vertical progression	1(2)(C) use objects, pictures, and expanded and standard forms to represent numbers up to 120.	2(2)(B) use standard, word, and expanded forms to represent numbers up to 1,200.
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(3) Number and operations. The student applies mathematical process standards to recognize and represent fractional units and communicates how they are used to name parts of a whole. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(3)(A) partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words.
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(3)(B) explain that the more fractional parts used to make a whole, the smaller the part; the fewer the fractional parts, the larger the part.
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(3)(C) use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole.
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(3)(D) identify examples and non-examples of halves, fourths, and eighths.

Adding and Subtracting Whole Numbers, Decimals, and Rational Numbers

Prekindergarten	**Kindergarten**	**Grade 1**	**Grade 2**
B. Adding To/Taking Away Skills	K(3) Number and operations. The student applies mathematical process standards to develop an understanding of addition and subtraction situations in order to solve problems. The student is expected to:	1(3) Number and operations. The student applies mathematical process standards to develop and use strategies for whole number addition and subtraction computations in order to solve problems. The student is expected to:	2(4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve addition and subtraction problems with efficiency and accuracy. The student is expected to:
V.B.1. Child uses concrete objects, creates pictorial models and shares a verbal word problem for adding up to 5 objects. V.B.2. Child uses concrete models or makes a verbal word problem for subtracting 0-5 objects from a set.	K(3)(A) model the action of joining to represent addition and the action of separating to represent subtraction.	1(3)(B) use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns as any one of the terms in the problem such as 2 + 4 = [ ]; 3 + [ ] = 7; and 5 = [ ] - 3.	No standard present in vertical progression
V.B.1. Child uses concrete objects, creates pictorial models and shares a verbal word problem for adding up to 5 objects. V.B.2. Child uses concrete models or makes a verbal word problem for subtracting 0-5 objects from a set.	K(3)(B) solve word problems using objects and drawings to find sums up to 10 and differences within 10.	1(3)(C) compose 10 with two or more addends with and without concrete objects.	No standard present in vertical progression
V.B.1. Child uses concrete objects, creates pictorial models and shares a verbal word problem for adding up to 5 objects. V.B.2. Child uses concrete models or makes a verbal word problem for subtracting 0-5 objects from a set.	K(3)(C) explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences.	1(3)(E) explain strategies used to solve addition and subtraction problems up to 20 using spoken words, objects, pictorial models, and number sentences.	2(4)(B) add up to four two-digit numbers and subtract two-digit numbers using mental strategies and algorithms based on knowledge of place value and properties of operations
No standard present in vertical progression	No standard present in vertical progression	1(3)(A) use concrete and pictorial models to determine the sum of a multiple of 10 and a one-digit number in problems up to 99.	2(4)(C) solve one-step and multistep word problems involving addition and subtraction within 1,000 using a variety of strategies based on place value, including algorithms.
No standard present in vertical progression	No standard present in vertical progression	1(3)(D) apply basic fact strategies to add and subtract within 20, including making 10 and decomposing a number leading to a 10.	2(4)(A) recall basic facts to add and subtract within 20 with automaticity.

Prekindergarten	Kindergarten	Grade 1	Grade 2
B. Adding To/Taking Away Skills	K(3) Number and operations. The student applies mathematical process standards to develop an understanding of addition and subtraction situations in order to solve problems. The student is expected to:	1(3) Number and operations. The student applies mathematical process standards to develop and use strategies for whole number addition and subtraction computations in order to solve problems. The student is expected to:	2(4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve addition and subtraction problems with efficiency and accuracy. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	1(3)(F) generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20.	2(4)(D) generate and solve problem situations for a given mathematical number sentence involving addition and subtraction of whole numbers within 1,000.

Representing and Determining the Values of Coins and Bills (Part 1)

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	K(4) Number and operations. The student applies mathematical process standards to identify coins in order to recognize the need for monetary transactions. The student is expected to:	1(4) Number and operations. The student applies mathematical process standards to identify coins, their values, and the relationships among them in order to recognize the need for monetary transactions. The student is expected to:	2(5) Number and operations. The student applies mathematical process standards to determine the value of coins in order to solve monetary transactions. The student is expected to:
No standard present in vertical progression	K(4)(A) identify U.S. coins by name, including pennies, nickels, dimes, and quarters.	1(4)(A) identify U.S. coins, including pennies, nickels, dimes, and quarters, by value and describe the relationships among them.	No standard present in vertical progression
No standard present in vertical progression	No standard present in vertical progression	1(4)(B) write a number with the cent symbol to describe the value of a coin.	2(5)(B) use the cent symbol, dollar sign, and the decimal point to name the value of a collection of coins.
No standard present in vertical progression	No standard present in vertical progression	1(4)(C) use relationships to count by twos, fives, and tens to determine the value of a collection of pennies, nickels, and/or dimes.	2(5)(A) determine the value of a collection of coins up to one dollar.

Representing and Determining the Value of Coins and Bills (Part 2)

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(6) Number and operations. The student applies mathematical process standards to connect repeated addition and subtraction to multiplication and division situations that involve equal groupings and shares. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(6)(A) model, create, and describe contextual multiplication situations in which equivalent sets of concrete objects are joined.
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(6)(B) model, create, and describe contextual division situations in which a set of concrete objects is separated into equivalent sets.

Pattern Skills

Prekindergarten	Kindergarten	Grade 1	Grade 2
E. Classification and Pattern Skills V.E.3. Child recognizes and creates patterns.	K(5) Algebraic reasoning. The student applies mathematical process standards to identify the pattern in the number word list. The student is expected to:	1(5) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:	2(7) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:

Connecting Counting and Reciting

Prekindergarten	Kindergarten	Grade 1	Grade 2
A. Counting Skills	K(5) Algebraic reasoning. The student applies mathematical process standards to identify the pattern in the number word list. The student is expected to:	1(5) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:	No standard present in vertical progression
V.A.2. Child uses words to rote count from 1 to 30.	K(5)(A) recite numbers up to at least 100 by ones and tens beginning with any given number.	1(5)(A) recite numbers forward and backward from any given number between 1 and 120.	No standard present in vertical progression

Connecting Counting and Divisibility

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	No standard present in vertical progression	1(5) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:	2(7) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	1(5)(B) skip count by twos, fives, and tens to determine the total number of objects up to 120 in a set.	2(7)(A) determine whether a number up to 40 is even or odd using pairings of objects to represent the number.

Connecting Counting and Place Value

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	No standard present in vertical progression	1(5) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:	2(7) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	1(5)(C) use relationships to determine the number that is 10 more and 10 less than a given number up to 120.	2(7)(B) use an understanding of place value to determine the number that is 10 or 100 more or less than a given number up to 1,200.

Representing Problem Situations with the Equal Sign

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	No standard present in vertical progression	1(5) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:	2(7) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	1(5)(D) represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences.	2(7)(C) represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem.
No standard present in vertical progression	No standard present in vertical progression	1(5)(E) understand that the equal sign represents a relationship where expressions on each side of the equal sign represent the same value(s).	2(7)(C) represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem.

Representing Problem Situations with the Equations and Inequalities

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	No standard present in vertical progression	1(5) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:	2(7) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	1(5)(F) determine the unknown whole number in an addition or subtraction equation when the unknown may be any one of the three or four terms in the equation.	2(7)(C) represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem.
No standard present in vertical progression	No standard present in vertical progression	1(5)(G) apply properties of operations to add and subtract two or three numbers.	No standard present in vertical progression

Defining Attributes of One-Dimensional, Two-Dimensional, and Three-Dimensional Figures

Prekindergarten	Kindergarten	Grade 1	Grade 2
C. Geometry and Spatial Sense Skills	K(6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:	1(6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:	2(8) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:
V.C.1. Child names common shapes.	K(6)(A) identify two-dimensional shapes, including circles, triangles, rectangles, and squares as special rectangles.	1(6)(C) create two-dimensional figures, including circles, triangles, rectangles, and squares, as special rectangles, rhombuses, and hexagons.	2(8)(A) create two-dimensional shapes based on given attributes, including number of sides and vertices.
No standard present in vertical progression	K(6)(D) identify attributes of two dimensional shapes using informal and formal geometric language interchangeably.	1(6)(D) identify two-dimensional shapes, including circles, triangles, rectangles, and squares, as special rectangles, rhombuses, and hexagons and describe their attributes using formal geometric language.	2(8)(A) create two-dimensional shapes based on given attributes, including number of sides and vertices.
V.C.1. Child names common shapes.	K(6)(B) identify three-dimensional solids, including cylinders, cones, spheres, and cubes, in the real world.	1(6)(E) identify three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes), and triangular prisms, and describe their attributes using formal geometric language.	No standard present in vertical progression
V.C.1. Child names common shapes.	K(6)(C) identify two-dimensional components of three-dimensional objects.	1(6)(B) distinguish between attributes that define a two-dimensional or three-dimensional figure and attributes that do not define the shape.	No standard present in vertical progression

Spatial Sense Skills

Prekindergarten	Kindergarten	Grade 1	Grade 2
C. Geometry and Spatial Sense Skills	No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression
V.C.4. Child slides, flips, and turns shapes to demonstrate that the shape remains the same.	No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression
V.C.3. Child demonstrates use of location words (such as “over,” “under,” “above,” “on,” “beside,” “next to,” “between,” “in front of,” “near,” “far,” etc.).	No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression

Classifying and Sorting

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	K(6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:	1(6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:	2(8) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:
No standard present in vertical progression	K(6)(E) classify and sort a variety of regular and irregular two- and three-dimensional figures regardless of orientation or size.	1(6)(A) classify and sort regular and irregular two-dimensional shapes based on attributes using informal geometric language.	2(8)(C) classify and sort polygons with 12 or fewer sides according to attributes, including identifying the number of sides and number of vertices.
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(8)(B) classify and sort three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes as special rectangular prisms), and triangular prisms, based on attributes using formal geometric language.

Composing and Decomposing Two-Dimensional and Three-Dimensional Figures

Prekindergarten	Kindergarten	Grade 1	Grade 2
C. Geometry and Spatial Sense Skills	K(6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:	1(6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:	2(8) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:
V.C.2. Child creates shapes.	K(6)(F) create two dimensional shapes using a variety of materials and drawings.	1(6)(F) compose two-dimensional shapes by joining two, three, or four figures to produce a target shape in more than one way if possible.	2(8)(D) compose two-dimensional shapes and three-dimensional solids with given properties or attributes.
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(8)(E) decompose two-dimensional shapes such as cutting out a square from a rectangle, dividing a shape in half, or partitioning a rectangle into identical triangles and identify the resulting geometric parts.

Measuring Attributes of Two-Dimensional and Three-Dimensional Objects

Prekindergarten	Kindergarten	Grade 1	Grade 2
D. Measurement Skills	K(7) Geometry and measurement. The student applies mathematical process standards to directly compare measurable attributes. The student is expected to:	No standard present in vertical progression	No standard present in vertical progression
No standard present in vertical progression	K(7)(A) give an example of a measurable attribute of a given object, including length, capacity, and weight.	No standard present in vertical progression	No standard present in vertical progression
V.D.1. Child recognizes and compares heights or lengths of people or objects.	K(7)(B) compare two objects with a common measurable attribute to see which object has more of/less of the attribute and describe the difference.	No standard present in vertical progression	No standard present in vertical progression
V.D.3. Informally recognizes and compares weights of objects or people.	K(7)(B) compare two objects with a common measurable attribute to see which object has more of/less of the attribute and describe the difference.	No standard present in vertical progression	No standard present in vertical progression

Measuring Length of Two-Dimensional and Three-Dimensional Objects

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	K(7) Geometry and measurement. The student applies mathematical process standards to directly compare measurable attributes. The student is expected to:	1(7) Geometry and measurement. The student applies mathematical process standards to select and use units to describe length and time. The student is expected to:	2(9) Geometry and measurement. The student applies mathematical process standards to select and use units to describe length, area, and time. The student is expected to:
No standard present in vertical progression	K(7)(A) give an example of a measurable attribute of a given object, including length, capacity, and weight.	1(7)(A) use measuring tools to measure the length of objects to reinforce the continuous nature of linear measurement.	2(9)(D) determine the length of an object to the nearest marked unit using rulers, yardsticks, meter sticks, or measuring tapes.
No standard present in vertical progression	No standard present in vertical progression	1(7)(B) illustrate that the length of an object is the number of same-size units of length that, when laid end-to-end with no gaps or overlaps, reach from one end of the object to the other.	2(9)(A) find the length of objects using concrete models for standard units of length.
No standard present in vertical progression	No standard present in vertical progression	1(7)(D) describe a length to the nearest whole unit using a number and a unit.	2(9)(A) find the length of objects using concrete models for standard units of length.
No standard present in vertical progression	No standard present in vertical progression	1(7)(C) measure the same object/distance with units of two different lengths and describe how and why the measurements differ.	2(9)(B) describe the inverse relationship between the size of the unit and the number of units needed to equal the length of an object.
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(9)(E) determine a solution to a problem involving length, including estimating lengths.

Measuring Time

Prekindergarten	Kindergarten	Grade 1	Grade 2
D. Measurement Skills	No standard present in vertical progression	1(7) Geometry and measurement. The student applies mathematical process standards to select and use units to describe length and time. The student is expected to:	2(9) Geometry and measurement. The student applies mathematical process standards to select and use units to describe length, area, and time. The student is expected to:
V.D.4. Child uses language to describe concepts associated with the passing of time.	No standard present in vertical progression	1(7)(E) tell time to the hour and half hour using analog and digital clocks.	2(9)(G) read and write time to the nearest one-minute increment using analog and digital clocks and distinguish between a.m. and p.m.

Measuring Distance on a Number Line

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(9) Geometry and measurement. The student applies mathematical process standards to select and use units to describe length, area, and time. The student is expected to
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(9)(C) represent whole numbers as distances from any given location on a number line.

Measuring Area and Volume

Prekindergarten	Kindergarten	Grade 1	Grade 2
D. Measurement Skills	No standard present in vertical progression	1(6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:	2(9) Geometry and measurement. The student applies mathematical process standards to select and use units to describe length, area, and time. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(9)(F) use concrete models of square units to find the area of a rectangle by covering it with no gaps or overlaps, counting to find the total number of square units, and describing the measurement using a number and the unit.
V.B.3. Child uses informal strategies to separate up to 10 items into equal groups	No standard present in vertical progression	1(6)(G) partition two-dimensional figures into two and four fair shares or equal parts and describe the parts using words.	No standard present in vertical progression
No standard present in vertical progression	No standard present in vertical progression	1(6)(H) identify examples and non-examples of halves and fourths.	No standard present in vertical progression
V.D.2. Child recognizes how much can be placed within an object.	No standard present in vertical progression		No standard present in vertical progression

Representing Data

Prekindergarten	Kindergarten	Grade 1	Grade 2
E. Classification and Pattern Skills	K(8) Data analysis. The student applies mathematical process standards to collect and organize data to make it useful for interpreting information. The student is expected to:	1(8) Data analysis. The student applies mathematical process standards to organize data to make it useful for interpreting information and solving problems. The student is expected to:	2(10) Data analysis. The student applies mathematical process standards to organize data to make it useful for interpreting information and solving problems. The student is expected to:
V.E.1. Child sorts objects that are the same and different into groups and uses language to describe how the groups are similar and different.	K(8)(A) collect, sort, and organize data into two or three categories.	1(8)(A) collect, sort, and organize data in up to three categories using models/representations such as tally marks or T-charts.	No standard present in vertical progression
V.E.2. Child collects data and organizes it in a graphic representation.	K(8)(A) collect, sort, and organize data into two or three categories.	1(8)(A) collect, sort, and organize data in up to three categories using models/representations such as tally marks or T-charts.	No standard present in vertical progression
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(10)(A) explain that the length of a bar in a bar graph or the number of pictures in a pictograph represents the number of data points for a given category.
V.E.2. Child collects data and organizes it in a graphic representation.	K(8)(B) use data to create real-object and picture graphs.	1(8)(B) use data to create picture and bar graphs.	2(10)(B) organize a collection of data with up to four categories using pictographs and bar graphs with intervals of one or more.

Drawing Conclusions and Solving Problems Using Representations of Data

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	K(8) Data analysis. The student applies mathematical process standards to collect and organize data to make it useful for interpreting information. The student is expected to:	1(8) Data analysis. The student applies mathematical process standards to organize data to make it useful for interpreting information and solving problems. The student is expected to:	2(10) Data analysis. The student applies mathematical process standards to organize data to make it useful for interpreting information and solving problems. The student is expected to:
No standard present in vertical progression	K(8)(C) draw conclusions from real-object and picture graphs.	1(8)(C) draw conclusions and generate and answer questions using information from picture and bar-type graphs.	2(10)(D) draw conclusions and make predictions from information in a graph.
No standard present in vertical progression			2(10)(C) write and solve one-step word problems involving addition or subtraction using data represented within pictographs and bar graphs with intervals of one.

Considering Income and Careers

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	K(9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:	1(9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:	2(11) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:
No standard present in vertical progression	K(9)(A) identify ways to earn income.	1(9)(A) define money earned as income .	No standard present in vertical progression
No standard present in vertical progression	K(9)(D) distinguish between wants and needs and identify income as a source to meet one's wants and needs.	1(9)(B) identify income as a means of obtaining goods and services, oftentimes making choices between wants and needs.	No standard present in vertical progression
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(11)(F) differentiate between producers and consumers and calculate the cost to produce a simple item.
No standard present in vertical progression	K(9)(B) differentiate between money received as income and money received as gifts.	No standard present in vertical progression	No standard present in vertical progression
No standard present in vertical progression	K(9)(C) list simple skills required for jobs.	No standard present in vertical progression	No standard present in vertical progression

Considering Saving and Investing

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	No standard present in vertical progression	1(9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:	2(11) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	1(9)(C) distinguish between spending and saving.	2(11)(A) calculate how money saved can accumulate into a larger amount over time.
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(11)(B) explain that saving is an alternative to spending.

Considering Credit and Debt

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(11) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(11)(D) identify examples of borrowing and distinguish between responsible and irresponsible borrowing
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(11)(E) identify examples of lending and use concepts of benefits and costs to evaluate lending decisions

Considering Planning and Money Management

Prekindergarten	Kindergarten	Grade 1	Grade 2
No standard present in vertical progression	No standard present in vertical progression	1(9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:	2(11) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:
No standard present in vertical progression	No standard present in vertical progression	1(9)(D) consider charitable giving.	No standard present in vertical progression
No standard present in vertical progression	No standard present in vertical progression	No standard present in vertical progression	2(11)(C) distinguish between a deposit and a withdrawal.