

KINDERGARTEN	GRADE 1	GRADE 2
<p><b>K.1.0 Number Sense:</b></p> <p>Students understand the relationship between numbers and quantities. They internalize conservation of number (i.e., a set of objects has the same number of objects in different situations, regardless of their position, arrangement, or size). Students can perform simple addition and subtraction problems and evaluate the reasonableness of answers.</p>	<p><b>1.1.0 Number Sense:</b></p> <p>Students understand and use numbers up to 100, estimate values, and solve simple addition and subtraction problems. They begin to use fractions and coins.</p>	<p><b>2.1.0 Number Sense:</b></p> <p>Students understand the relationships between numbers, quantities, and place value in whole numbers up to 999. They recognize fractions and decimals as parts of a whole. Computation tasks include simple multiplication and division problems. Students count, add, and subtract money values.</p>
<p><b><i>Number Relationships :</i></b></p> <p>K.1.1 Organize and match sets of objects to demonstrate an understanding of one-to-one correspondence.</p> <p>K.1.2 Compare two or more sets of objects (up to ten objects in each group) and identify which set is equal to, more than, or less than the other.</p> <p>K.1.3 Count, recognize, represent, name, group, and order a number of objects, up to 30.</p> <p>K.1.4 Know and demonstrate that large numbers describe sets with more objects in them than sets described by smaller numbers.</p> <p>K.1.5 Identify and order “first” through “tenth,” “next,” and “last” positions.</p>	<p><b><i>Number Relationships :</i></b></p> <p>1.1.1 Count, read, and write whole numbers to 100.</p> <p>1.1.2 Compare, group, and order whole numbers to 100 by using the symbols for “less than”, “equal to”, and “greater than” (&lt;, =, &gt;).</p> <p>1.1.3 Represent equivalent forms of the same whole numbers up to 20, through the use of physical models, diagrams, and number expressions (e.g., 8 may be represented as 4 + 4, 5 + 3, 2 + 2 + 2 + 2, 10 - 2, 11 - 3).</p> <p>1.1.4 Count and group objects into tens and ones (e.g., 34 equals three groups of 10 and 4 ones, or 30 + 4).</p>	<p><b><i>Number Relationships:</i></b></p> <p>2.1.1 Count, read, and write whole numbers to 999 and identify the place value for each digit.</p> <p>2.1.2 Use words, models, and expanded forms (e.g., 45 = 4 tens + 5 ones) to represent numbers to 999.</p> <p>2.1.3 Compare, order, and group whole numbers to 999 by using the symbols &lt;, =, &gt;.</p> <p>2.1.4 Distinguish between even and odd numbers.</p>
<p><b><i>Operations:</i></b></p> <p>K.1.6 Use concrete objects to demonstrate simple additions and subtractions.</p> <p>K.1.7 Use concrete objects to determine the answers to addition and subtraction problems involving two numbers that are each less than 10.</p>	<p><b><i>Operations:</i></b></p> <p>1.1.5 Demonstrate concretely and explain verbally the concepts of addition (putting together, joining, increasing) and subtraction (taking away, comparing, finding the difference).</p> <p>1.1.6 Use manipulatives to explore different combinations of whole numbers, and write the equations that accompany them.</p>	<p><b><i>Operations – Addition and Subtraction:</i></b></p> <p>2.1.5 Know basic addition and subtraction facts.</p> <p>2.1.6 Estimate and calculate solutions to problems involving addition and subtraction of two- and three-digit numbers.</p>

KINDERGARTEN	GRADE 1	GRADE 2
	<p>1.1.7 Apply the inverse relationship between addition and subtraction to solve problems (e.g., if <math>5 + 3 = 8</math>, then <math>8 - 3 = 5</math>).</p> <p>1.1.8 Identify the number that is “one more than”, “one less than”, “10 more than”, and “10 less than” a given number.</p> <p>1.1.9 Count by 2’s, 5’s, and 10’s to 100.</p> <p>1.1.10 Select the appropriate operation, addition or subtraction, to solve problems.</p> <p>1.1.11 Solve addition and subtraction problems with one- and two-digit numbers without regrouping.</p> <p>1.1.12 Find the sum of three one-digit numbers.</p>	<p>2.1.7 Understand and use the inverse relationship between addition and subtraction to solve problems and check solutions (e.g., an opposite number sentence for <math>8 + 6 = 14</math> is <math>14 - 6 = 8</math>).</p> <p>2.1.8 Add two- and three-digit whole numbers with and without regrouping.</p> <p>2.1.9 Subtract two-digit whole numbers with and without regrouping.</p> <p>2.1.10 Subtract three-digit whole numbers without regrouping.</p> <p><b>Operations – Multiplication and Division:</b></p> <p>2.1.11 Use repeated addition, arrays, and counting by multiples to model and solve simple multiplication problems.</p> <p>2.1.12 Use repeated subtraction, equal sharing, and forming equal groups to model and solve simple division problems.</p> <p>2.1.13 Know and use the multiplication tables of 0, 1’s, 2’s, 5’s, and 10’s (to “times 10”) and commit them to memory.</p> <p>2.1.14 Skip count by 3’s and 4’s (to “times 10”).</p>
<p><b>Fractions:</b></p> <p>K.1.8 Recognize, distinguish, and apply fraction terms and concepts, including: fraction, whole, all, part, some, none.</p>	<p><b>Fractions:</b></p> <p>1.1.13 Represent fractions by using models and drawings.</p> <p>1.1.14 Compare a whole to fractional parts (e.g., <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{3}</math>).</p>	<p><b>Fractions and Decimals:</b></p> <p>2.1.15 Recognize, name, and compare unit fractions from <math>\frac{1}{12}</math> to <math>\frac{1}{2}</math> using pictures or manipulatives.</p> <p>2.1.16 Demonstrate the understanding that fractions and decimals may refer to parts of a whole and parts of a set.</p>

KINDERGARTEN	GRADE 1	GRADE 2
	1.1.15 Divide a whole into fractional parts (e.g., $\frac{1}{2}$ , $\frac{1}{4}$ ).	2.1.17 Recognize fractions of a whole and parts of a group using pictures or manipulatives (e.g., one-fourth of a pie, two-thirds of 15 balls).  2.1.18 Demonstrate using pictures or manipulatives that when all fractional parts are included, such as four fourths, the result is equal to the whole and to one.
<p><b>Money:</b></p> <p>K.1.9 Sort and name coins by physical characteristics (penny, nickel, dime, quarter).</p>	<p><b>Money:</b></p> <p>1.1.16 Identify the value of coins (penny, nickel, dime, quarter).</p> <p>1.1.17 Determine the total value of a group of like coins up to a total of \$1.00.</p> <p>1.1.18 Find equal money amounts with different coin combinations up to \$0.25.</p>	<p><b>Money:</b></p> <p>2.1.19 Model and solve problems by representing, adding, and subtracting amounts of money.</p> <p>2.1.20 Use patterns to count pennies, nickels, dimes, quarters, and half dollars up to \$1.00.</p> <p>2.1.21 Find different coin combinations that represent equal money amounts up to \$1.00.</p> <p>2.1.22 Solve problems involving combinations of coins and bills.</p> <p>2.1.23 Read and write both the decimal notation and the dollar and cent symbols for money.</p> <p>2.1.24 Make change up to \$1.00.</p>
<p><b>Estimation:</b></p> <p>K.1.10 Use estimation strategies in computation and problem solving involving numbers that use the ones and tens places.</p> <p>K.1.11 Recognize when an estimate is reasonable.</p>	<p><b>Estimation:</b></p> <p>1.1.19 Use estimation strategies in computation and problem solving involving numbers that use the ones, tens, and hundreds places.</p> <p>1.1.20 Make reasonable estimates when using large or small numbers.</p>	<p><b>Estimation:</b></p> <p>2.1.25 Use estimation strategies in computation and problem solving involving numbers that use the ones, tens, hundreds, and thousands places.</p> <p>2.1.26 Recognize when an estimate is reasonable in measurements (e.g., closest inch or cm).</p> <p>2.1.27 Estimate quantities to the nearest multiple of ten.</p> <p>2.1.28 Round two-digit whole numbers to the nearest multiple of ten.</p>

KINDERGARTEN	GRADE 1	GRADE 2
<p><b>K.2.0 Algebra and Functions:</b></p> <p>Students can describe characteristics and patterns. They use them to sort and classify objects.</p>	<p><b>1.2.0 Algebra and Functions:</b></p> <p>Students describe and extend patterns. They write and use simple number sentences to express situations and solve problems.</p>	<p><b>2.2.0 Algebra and Functions:</b></p> <p>Students extend linear patterns and apply them to solve problems. They model, represent, and interpret number relationships to create and solve problems involving addition and subtraction.</p>
<p><b><i>Sorting and Patterns:</i></b></p> <p>K.2.1 Identify, sort, and classify objects by attribute and select objects that do not belong to a particular group (e.g., all these balls are green, those are red)</p> <p>K.2.2 Identify, describe, and extend simple patterns (such as circles or triangles) by referring to their shapes, sizes, or colors.</p>	<p><b><i>Sorting and Patterns:</i></b></p> <p>1.2.1 Sort objects and create and describe patterns using the characteristics of number, shape, size, rhythm, or color.</p> <p>1.2.2 Describe, extend, and explain ways to get to the next element in simple repeating patterns (e.g., number, shape, size, rhythm, or color).</p>	<p><b><i>Patterns:</i></b></p> <p>2.2.1 Recognize, describe, and extend patterns and determine the next term in linear patterns (e.g., 4, 8, 12 ...; the number of ears on one horse, two horses, three horses, four horses).</p> <p>2.2.2 Solve problems involving simple number patterns.</p>
<p><b><i>Equations and Properties:</i></b></p>	<p><b><i>Symbols and Equations:</i></b></p> <p>1.2.3 Define the vocabulary terms “sum”, “difference”, “equal”, and the meaning of the symbols +, -, =.</p> <p>1.2.4 Solve number sentences with operational symbols and expressions.</p> <p>1.2.5 Write and solve number sentences from problem situations that express relationships involving addition and subtraction.</p> <p>1.2.6 Create and describe problem situations that will lead to given number sentences involving addition and subtraction.</p>	<p><b><i>Equations and Properties:</i></b></p> <p>2.2.3 Use the commutative and associative rules to simplify mental</p> <p>2.2.4 Relate problem situations involving addition and subtraction to number sentences.</p> <p>2.2.5 Solve addition and subtraction number sentences.</p> <p>2.2.6 Solve problems involving missing addends.</p> <p>2.2.7 Solve addition and subtraction problems using data from simple charts and picture graphs.</p>

KINDERGARTEN	GRADE 1	GRADE 2
<p><b>K.3.0 Measurement and Geometry:</b></p> <p>Students understand the concept of time and units to measure it. They understand that objects have properties such as length, weight, and capacity, and that comparisons may be made by referring to those properties. They identify common objects in the environment and describe their geometric features.</p>	<p><b>1.3.0 Measurement and Geometry:</b></p> <p>Students use non-standard and standard units of measurement. They identify common Geometric figures, classify them by common attributes, and describe their relative position or their location in space.</p>	<p><b>2.3.0 Measurement and Geometry:</b></p> <p>Students understand that measurement is accomplished by identifying a unit of measure, repeating that unit, and comparing it to the item to be measured. They can identify and describe the attributes of common figures in the plane and of common objects in space.</p>
<p><i>Time and Measurement:</i></p> <p>K.3.1 Demonstrate an understanding of concepts of time (e.g., morning, afternoon, evening, today, yesterday, tomorrow, week, year) and tools that measure time (e.g., clock, calendar).</p> <p>K.3.2 Name the days of the week.</p> <p>K.3.3 Identify the time of everyday events to the nearest hour (e.g., lunchtime is 12 o'clock; bedtime is 8 o'clock at night).</p> <p>K.3.4 Compare the length, weight, and capacity of objects by making direct comparisons with reference objects (e.g., note which object is shorter, longer, taller, lighter, heavier, or holds more).</p>	<p><i>Time and Measurement:</i></p> <p>1.3.1 Tell time to the nearest half-hour and relate time to events (e.g., before/after, shorter/longer).</p> <p>1.3.2 Demonstrate the ability to locate a specific date on a calendar.</p> <p>1.3.3 Use direct comparison, non-standard and standard units, to describe the measurements of objects.</p> <p>1.3.4 Compare the length, weight, and volume of two or more objects by using direct comparison, non-standard and standard units.</p>	<p><i>Time and Measurement:</i></p> <p>2.3.1 Tell time to the quarter hour and using 5-minute intervals.</p> <p>2.3.2 Know the relationship between units of time (e.g., minutes in an hour, days in a month, weeks in a year).</p> <p>2.3.3 Determine the duration of intervals of time in hours (e.g., 11:00 a.m. to 4:00 p.m. is 5 hours).</p> <p>2.3.4 List the months of the year in sequential order. Apply knowledge of that sequence to answer questions and solve problems.</p> <p>2.3.5 Measure the length of an object by repeating a non-standard or standard unit.</p> <p>2.3.6 Predict how changing the size of the unit will affect the number of units in the measurement of an object (e.g., will there be more inches or feet in the length of a desk?). Then, use the different units to measure the same object and check the prediction.</p> <p>2.3.7 Measure the length of an object to the nearest inch and/or centimeter.</p> <p>2.3.8 Compare seasonal temperatures using a Fahrenheit thermometer.</p>

KINDERGARTEN	GRADE 1	GRADE 2
<p><b>Geometry:</b></p> <p>K.3.5 Identify and describe common geometric objects in real life (e.g., circle, triangle, square, rectangle, cube, sphere, cone).</p> <p>K.3.6 Compare familiar plane and solid objects by common attributes (e.g., position, shape, size, roundness, number of corners).</p>	<p><b>Geometry:</b></p> <p>1.3.5 Distinguish between open and closed figures.</p> <p>1.3.6 Identify, describe, compare, and build triangles, rectangles, squares, and circles, including the faces of three-dimensional objects.</p> <p>1.3.7 Classify familiar plane and solid objects by common attributes such as color, position, shape, size, roundness, or number of corners, and explain which attributes are being used for classification.</p> <p>1.3.8 Identify symmetrical objects (e.g., in nature).</p> <p>1.3.9 Give and follow directions about location.</p> <p>1.3.10 Arrange and describe objects in space by proximity, position, and direction (e.g., near, far, below, above, up, down, behind, in front of, next to, left or right of).</p>	<p><b>Geometry:</b></p> <p>2.3.9 Describe and classify plane and solid geometric shapes (e.g., circle, triangle, square, rectangle, sphere, cone, pyramid, cube, rectangular prism) according to the number of vertices and the number and shape of faces and edges.</p> <p>2.3.10 Put shapes together and take them apart to form other shapes (e.g., two congruent right triangles can be arranged to form a rectangle).</p> <p>2.3.11 Identify and draw lines of symmetry in plane geometric figures.</p> <p>2.3.12 Fold paper to demonstrate the reflections about a line.</p> <p>2.3.13 Identify and extend figure patterns using reflections.</p>

KINDERGARTEN	GRADE 1	GRADE 2
<p><b>K.4.0 Statistics, Data Analysis, and Probability:</b></p> <p>Students collect information about objects and events in the environment.</p>	<p><b>1.4.0 Statistics, Data Analysis, and Probability:</b></p> <p>Students organize, represent, and compare data by category on simple graphs and charts.</p>	<p><b>2.4.0 Statistics, Data Analysis, and Probability:</b></p> <p>Students collect numerical data and record, organize, display, and interpret that data using a variety of representations.</p>
<p><b><i>Data Representation and Interpretation:</i></b></p> <p>K.4.1 Pose information questions, collect data, and record the results using objects, pictures, and picture graphs.</p>	<p><b><i>Data Representation and Interpretation:</i></b></p> <p>1.4.1 Sort objects and data by common attributes and describe the categories.</p> <p>1.4.2 Represent and compare data (e.g., largest, smallest, most often, least often) by using pictures, bar graphs, tally charts, and picture graphs.</p>	<p><b><i>Data Representation and Interpretation:</i></b></p> <p>2.4.1 Record numerical data in systematic ways, keeping track of what has been counted.</p> <p>2.4.2 Represent the same data set in more than one way (e.g., bar graphs and charts with tallies).</p> <p>2.4.3 Identify the range and mode of a data set.</p> <p>2.4.4 Ask and answer simple questions related to data.</p> <p>2.4.5 Interpret and draw pictographs using the key to indicate the quantity (one or two) represented by each symbol.</p>

KINDERGARTEN	GRADE 1	GRADE 2
<p><b>K.5.0 Mathematical Reasoning:</b></p> <p>Students make decisions about how to set up a problem. They solve problems and justify their reasoning.</p>	<p><b>1.5.0 Mathematical Reasoning:</b></p> <p>Students make decisions about how to set up a problem. They select appropriate strategies, check results, and explain their reasoning.</p>	<p><b>2.5.0 Mathematical Reasoning:</b></p> <p>Students make decisions about how to set up a problem. They justify processes and reasoning.</p>
<p><b><i>How to Approach a Problem:</i></b></p> <p>K.5.1 Determine the approach, materials, and strategies to be used to solve a problem.</p> <p>K.5.2 Use tools and strategies, such as manipulatives, to model problems.</p>	<p><b><i>How to Approach a Problem:</i></b></p> <p>1.5.1 Determine the approach, materials, and strategies to be used to solve a problem.</p> <p>1.5.2 Use tools, such as manipulatives or sketches, to model problems.</p>	<p><b><i>How to Approach a Problem:</i></b></p> <p>2.5.1 Determine the approach, materials, and strategies to be used to solve a problem.</p> <p>2.5.2 Use tools, such as manipulatives or sketches, to model problems.</p>
<p><b><i>Problem Solving:</i></b></p> <p>K.5.3 Solve problems in reasonable ways and justify the reasoning.</p> <p>K.5.4 Explain the reasoning used with concrete objects and/or pictorial representations.</p> <p>K.5.5 Make calculations and check the validity of the results in the context of the problem.</p>	<p><b><i>Problem Solving:</i></b></p> <p>1.5.3 Solve problems, explain the reasoning used, and justify the procedures selected.</p> <p>1.5.4 Make precise calculations and check the validity of the results in the context of the problem.</p> <p>1.5.5 Note connections between one problem and another.</p>	<p><b><i>Problem Solving:</i></b></p> <p>2.5.3 Solve problems and justify the reasoning used.</p> <p>2.5.4 Defend and justify the procedures selected to solve problems.</p> <p>2.5.5 Make precise calculations and check the validity of the results in the context of the problem.</p> <p>2.5.6 Note connections between one problem and another.</p>