



3rd Grade Math Curriculum Overview

The primary focal areas in Grade 3 are place value, operations of whole numbers, and understanding fractional units. These focal areas are supported throughout the mathematical strands of number and operations, algebraic reasoning, geometry and measurement, and data analysis. In Grades 3-5, the number set is limited to positive rational numbers. In number and operations, students will focus on applying place value, comparing and ordering whole numbers, connecting multiplication and division, and understanding and representing fractions as numbers and equivalent fractions. In algebraic reasoning, students will use multiple representations of problem situations, determine missing values in number sentences, and represent real-world relationships using number pairs in a table and verbal descriptions. In geometry and measurement, students will identify and classify two-dimensional figures according to common attributes, decompose composite figures formed by rectangles to determine area, determine the perimeter of polygons, solve problems involving time, and measure liquid volume (capacity) or weight. In data analysis, students will represent and interpret data. Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

Year at a Glance

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1st 9 Weeks	2nd 9 Weeks
<p>Unit 1: Numeration</p> <ul style="list-style-type: none"> ● 3.2 (A) - compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate. ● 3.2 (B) - describe mathematical relationships found in the base-10 place value system through the hundred thousand place ● 3.2 (C)-represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 & use words to describe relative size of numbers in order to round whole numbers; ● 3.2 (D)-compare and order whole numbers up to 100,000 and represent comparisons using the symbols $>$, $<$, or $=$ ● 3.4 (B) - round to the nearest 10 or 100 or use compatible numbers to estimate solutions to addition and subtraction problems <p>Unit 2: Adding and Subtracting</p> <ul style="list-style-type: none"> ● 3.4 (A) - solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction ● 3.4 (C) - determine the value of a collection of coins and bills ● 3.5 (A) - represent one and two step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations <p>Unit 3: Multiplication Facts</p> <ul style="list-style-type: none"> ● 3.4 (D) - determine the total number of objects when equally sized groups of objects are combined or arranged in arrays up to 10 by 10 (S) ● 3.4 (E) - represent multiplication facts by using a variety of approaches such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, and skip counting ● 3.4 (F) - recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts 	<p>Unit 4: Division</p> <ul style="list-style-type: none"> ● 3.4 (F) - recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts ● 3.4 (H) - determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally ● 3.4 (I) - determine if a number is even or odd using divisibility rules ● 3.4 (J) - determine a quotient using the relationship between multiplication and division ● 3.4 (K) - solve one and two step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts. ● 3.5 (B) - represent and solve one and two step multiplication and division problems within 100 using arrays, strip diagrams, and equations <p>Unit 5): Multiplication 2 x 1</p> <ul style="list-style-type: none"> ● 3.2 (A) - See Unit 1 ● 3.5 (B) and 3.4 (K) - See Unit 4 ● 3.4 (G) - use strategies and algorithms, including the standard algorithm, to multiply a two-digit number by a one-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties ● 3.5 (C) - describe a multiplication expression as a comparison such as 3×24 represents 3 times as much as 24 <p>Unit 6: Table Patterns and Equations</p> <ul style="list-style-type: none"> ● 3.5(A) - See Unit 2 ● 3.5 (D) determine the unknown whole number in a mult. or div. equation relating 3 whole numbers when the unknown is either a missing factor or product ● 3.5 (E) - represent real world relationships using number pairs in a table and verbal descriptions

3rd 9 Weeks**4th 9 Weeks****Unit 7: Fractions**

- 3.3 (A) - represent fractions greater than 0 & less than or equal to 1 w/ denominators of 2, 3, 4, 6, 8 using concrete objects and pictorial models, including strip diagrams & number lines.
- 3.3 (B) - determine the corresponding fraction > 0 & ≤ 1 w/ denominators of 2, 3, 4, 6, 8 given a specified point on a number line
- 3.3 (C) - explain the unit fraction $1/b$ represents the quantity formed by 1 part of a whole that has been partitioned in b equal parts where b is a non-zero whole number
- 3.3 (D) - compose and decompose a fraction a/b with a numerator greater than 0 and less than or equal to b as a sum of parts $1/b$
- 3.3 (E) - solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, 8
- 3.3 (F) - represent equivalent fractions w/ denominators of 2, 3, 4, 6, 8 using a variety of objects & pictorial models, including number lines
- 3.3 (G) - explain that two fractions are equivalent if and only if they are both represented by the same point on the number line or represent the same portion of a same size whole for an area model
- 3.3 (H) - compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models.
- 3.7 (A) - represent fractions of halves, fourths, and eighths as distances from zero on a number line

Unit 8: Geometry

- 3.6 (A) - classify & sort two and three dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language
- 3.6 (B) - use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, & squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories
- 3.6 (C) - determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row
- 3.6 (D) - decompose and compose figures formed by rectangles into non-overlapping rectangles to determine the area of the original figure using the additive property of area
- 3.6 (E) - decompose 2 congruent 2d figures into parts with equal areas & express the area of each part as a unit fraction of the whole & recognize that equal shares of identical wholes need not have the same shape.
- 3.7 (B) - determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems

Unit 9: Data Analysis

- 3.8 (A) - summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals
- 3.8 (B) - solve one and two step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals.

Unit 10: Measurement

- 3.7 (C) - determine solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools such as a 15 minute event plus a 30 minute event equals 45 minutes
- 3.7 (D) - determine when appropriate to use measurements of liquid volume (capacity) or weight
- 3.7 (E) - determine liquid volume (capacity) or weight using appropriate units and tools.

Unit 11: Financial Literacy

- 3.9 (A) - explain the connection between human capital/labor/income
- 3.9 (B) - describe the relationship between the availability or scarcity of resources and how that impacts cost
- 3.9 (D) - explain that credit is used when wants or needs exceed the ability to pay & that is the borrower's responsibility to pay it back to the lender, usually with interest.
- 3.9 (E) - list reasons to save & explain the benefit of a savings plan, including for college