



Mathematics Curriculum Outline Third Grade Parent Copy

The ultimate goal for mathematics learners is number literacy. A successful mathematics learner is able to use mathematical processes and procedures in order to participate in our highly technical society. Mathematics is used on a daily basis in the real world. Using money, measurements, and cooking are only a few of the ways we use mathematics in our society. Your child will become fluent in the use of mathematic processes and procedures by learning the specific Grade Level Content Expectations at each grade level.

3:1 Understand and use number notation and place value

- 1:A** The student will read and write numbers to 10,000 in both numerals and words, and relate them to the quantities they represent.
- 1:B** The student will recognize and use expanded notation for numbers using place value to 10,000's place and identify the place value of a digit in a number.
- 1:C** The student will compare and order numbers up to 10,000.

3:2 Count in steps, and understand even and odd numbers

- 2:A** The student will count orally by 6's, 7's, 8's and 9's starting with 0, making the connection between repeated addition and multiplication.
- 2:B** The student will know that even numbers end in 0, 2, 4, 6, or 8; name a whole number quantity that can be shared in two equal groups or grouped into pairs with no remainders; recognize even numbers as multiples of 2. Know that odd numbers end in 1, 3, 5, 7, or 9, and work with patterns involving even and odd numbers.

3:3 Add and subtract whole numbers

- 3:A** The student will add and subtract fluently two numbers: up to and including two digit numbers with regrouping and up to four-digit numbers without regrouping.
- 3:B** The student will estimate the sum and difference of two numbers with three digits (sums up to 1,000), and judge reasonableness of estimates.
- 3:C** The student will use mental strategies to fluently add and subtract two-digit numbers.

3:4 Multiply and divide whole numbers

- 4:A** The student will use multiplication and division fact families to understand the inverse relationship of these two operations and express a multiplication statement as an equivalent division statement.
- 4:B** The student will recognize situations that can be solved using multiplication and division including finding "How many groups?" and "How many in a group?" and write mathematical statements for those situations.

- 4:C** The student will find products fluently up to 10×10 ; find related quotients using multiplication and division relationships.
- 4:D** The student will find solutions to open sentences such as $7 \times \quad = 42$ or $12 \div \quad = 4$, using the inverse relationship between multiplication and division.
- 4:E** The student will mentally calculate simple products and quotients up to a three-digit number by a one-digit number involving multiples of 10.
- 4:F** The student will solve simple division problems involving remainders, viewing the remainder as the “number left over” (less than the divisor) and interpret the remainder based on problem context.

3:5 Problem solving with whole numbers

- 5:A** Given problems that use any one of the four operations with appropriate numbers, the student will represent the problem with objects, words (including “product” and “quotient”), and mathematical statements and solve.

3:6 Understand simple fractions, relation to the whole, and addition and subtraction of fractions

- 6:A** The student will understand that fractions may represent a portion of a whole unit that has been partitioned into parts of equal area or length; use the terms “numerator” and “denominator.”
- 6:B** The student will recognize, name and use equivalent fractions with denominators 2, 4, and 8, using strips as area models.
- 6:C** The student will place fractions with denominators of 2, 4, and 8 on the number line; relate the number line to a ruler; compare and order up to three fractions with denominators 2, 4, and 8.
- 6:D** The student will understand that any fraction can be written as a sum of unit fractions.
- 6:E** The student will recognize that addition and subtraction of fractions with equal denominators can be modeled by joining and taking away segments on the number line.

3:7 Understand simple decimal fractions in relation to money

- 7:A** The student will understand the meaning of \$0.50 and \$0.25 related to money.

3:8 Measure and use units for length, weight, temperature and time.

- 8:A** The student will know and use common units of measurements in length, weight and time.

- 8:B** The student will measure in mixed units within the same measurement system for length, weight and time: feet and inches, meters and centimeters, kilograms and grams, pounds and ounces, liters and milliliters, hours and minutes, minutes and seconds, years and months.
- 8:C** The student will understand relationships between sizes of standard units.
- 8:D** The student will know benchmark temperatures such as freezing and boiling, and compare temperatures.

3:9 Understanding meaning of area and perimeter and apply in problems

- 9:A** The student will know the definition of area and perimeter and calculate the perimeter of a square and rectangle given whole number side lengths.
- 9:B** The student will use square units in calculating area by covering the region and counting the number of square units.
- 9:C** The student will distinguish between units of length and area and choose a unit appropriate in the context.
- 9:D** The student will visualize and describe the relative size of one square inch and one square centimeter.

3:10 Estimate perimeter and area

- 10:A** The student will estimate the perimeter of a square and rectangle in inches and centimeters; estimate the area of a square and rectangle and square inches and square centimeters.

3:11 Solve Measurement Problems

- 11:A** The student will add and subtract lengths, weights and times using mixed units within the same measurement system.
- 11:B** The student will add and subtract money in dollars and cents.
- 11:C** The student will solve applied problems involving money, length and time.
- 11:D** The student will solve contextual problems about perimeters of rectangles and areas of rectangular regions.

3:12 Recognize the basic elements of geometric shapes

- 12:A** The student will identify points, line segments, lines and distance.
- 12:B** The student will identify perpendicular lines and parallel lines in familiar shapes and in the classroom.

12:C The student will identify parallel faces of rectangular prisms, in familiar shapes and in the classroom.

3:13 Name and explore properties of shapes

13:A The student will identify, describe, compare and classify two-dimensional shapes based on their component parts and the number of sides and vertices.

13:B The student will compose and decompose triangles and rectangles to form other familiar two-dimensional shapes.

3:14 Explore and name three-dimensional solids

14:A The student will identify, describe, build and classify familiar three-dimensional solids based on their component parts.

14:B The student will represent front, top, and side views of solids built with cubes.

3:15 Use bar graphs

15:A The student will read and interpret bar graphs.

15:B The student will read scales on the axes and identify the maximum, minimum, and range of values in a bar graph.

15:C The student will solve problems using information in bar graphs including comparison of bar graphs.