

# Math

## THIRD GRADE

Students in third grade are active and inquisitive. They are primarily concrete learners, acquiring knowledge through hands-on experiences. Instructional tasks that relate to their personal lives stimulate their interest.

Third-grade students need a classroom environment that helps them learn to work together as a community of learners. This environment provides an atmosphere in which students are recognized as individuals whose ideas are valued, and one in which opportunities are provided for all individuals in the classroom to work together as members of a team. In such an environment, students feel less threatened about making mistakes and have a more positive attitude toward receiving ideas for improvement.

Third-grade students enjoy intellectually stimulating activities that promote enthusiasm and capture their interest. Such activities better enable students to make sense of mathematics. Students compare and order whole numbers, identify two-dimensional figures based on attributes, expand their knowledge of measurement and data analysis, and strengthen computational fluency by applying problem-solving strategies. The third-grade content enables students to use mathematics in other disciplines and to connect mathematics to the real world.

### Number and Operations

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Students will:

1. Demonstrate number sense by comparing, ordering, and expanding whole numbers through 9999
  - Compare numbers using the symbols  $>$ ,  $<$ ,  $=$ , and  $\neq$
  - Identify the place value of any digit within a four-digit number
  - Write a four-digit number in words and locating it on a number line
  - Determine the value of a number written in expanded notation to the ten-thousands place
  - Round whole numbers to the nearest ten and hundred and money values to the nearest dollar
2. Solve addition and subtraction problems, including word problems, involving two- and three-digit numbers with and without regrouping
  - Estimate sums and differences by using compatible numbers, front-end estimation, and rounding
  - Demonstrate computational fluency in addition and subtraction
    - Complete 100 addition or subtraction facts in 5 minutes
    - Complete 50 multiplication facts through 9 in 4 minutes
    - Complete 25 division facts through 9 in 3 minutes
3. Multiply whole numbers with and without regrouping using single-digit multipliers
  - Apply concepts of multiplication through the use of manipulatives, number stories, arrays, repeated addition, or problem situations
  - Apply basic multiplication facts through  $9 \times 9$  by using manipulatives, solving problems, and writing number stories
  - Recognize properties of multiplication

4. Divide whole numbers using two-digit dividends and one-digit divisors
  - Recognize division as repeated subtraction
5. Model equivalent fractions with concrete objects or pictorial representations
6. Write money amounts in words and dollar-and-cent
  - Use coins to make change up to \$5.00
  - Determine monetary values of sets of unlike coins and bills up to \$5.00
  - Solve word problems involving money

## **Algebra**

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7. Complete a given numeric or geometric pattern.

## **Geometry**

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8. Identify geometric representations for points, lines, perpendicular lines, parallel lines, angles, and rays.
  - Recognize real-life examples of points, lines, perpendicular lines, and parallel lines
  - Draw points, lines, and perpendicular lines
9. Specify locations on a coordinate grid by using horizontal and vertical movements.

## **Measurement**

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10. Measure length in metric and customary units
11. Identify appropriate measurement required for problem solving
12. Determine elapsed time to the day with calendars and to the hour with a clock
  - Calculate elapsed time to the minute within the same hour
  - Apply vocabulary associated with time using *a.m.*, *p.m.*, *noon*, or *midnight*

## **Data Analysis and Probability**

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13. Recognize data as either categorical or numerical.
  - Compare related data sets
14. Determine the likelihood of different outcomes in a simple experiment.