

## Course/Grade Level: Grade Three Math Curriculum

**Focus:** Students will solve multiplication and division fact families through the 5s, as well as the 10s; compare fractions; and apply operations to solve problems with whole numbers.

### **M.3.1 Students will order and compare numbers from 0 through 10,000 and identify the place value of various digits. Students will...**

- M.3.1.1 ▲ compare and order whole numbers from 0 through 10,000 with and without the use of concrete objects. **(3.1.1K2a)**
- M.3.1.2 read, write, and identify numbers using numerals and words from tenths place through ten thousands place.
- M.3.1.3 read, write, and identify numbers using expanded form from tenths place through ten thousands place.
- M.3.1.4 identify the place value of various digits from tenths to one hundred thousands place.
- M.3.1.5 classify various subsets of numbers as whole numbers, fractions, or decimals.
- M.3.1.6 identify and compare fractions greater than or equal to zero with like denominators (halves, fourths, thirds, eighths, tenths, sixteenths) using concrete objects. **(3.2.4.K2c)**
- M.3.1.7 use and identify decimals greater than or equal to zero through tenths place. **(3.1.1K1c)**
- M.3.1.8 skip count (multiply) by 2s, 3s, 4s, 5s, and 10s. **(3.1.4.K3)**

### **M.3.2 Students will recognize, describe, and explain relationships in patterns using concrete objects in a variety of situations. Students will...**

- M.3.2.1 ▲ recognize multiple representations of the same pattern. e.g., the ABC pattern could be represented by clap, snap, stomp...red, green, yellow,...tricycle, bicycle, unicycle,...or 3, 2, 1,... **(3.2.1.A2)**
- M.3.2.2 ▲ generalize numerical patterns using whole numbers from 0 through 200 with one operation (addition, subtraction) by stating the rule using words. e.g., if the sequence is 30, 50, 70, 90...in words, "the rule is add twenty to the number before." **(3.2.3.K3)**
- M.3.2.3 ▲ recognize and/or describe shapes in a pattern block set. **(3.3.1.K4)**
- M.3.2.4 demonstrate the use of models and patterns (geometric figures, numbers, and objects).

**M.3.3 Students will model, perform, and explain computation with whole numbers and money including the use of concrete objects in a variety of situations. Students will...**

- M.3.3.1 ▲ know, explain, and use equivalent representations including the use of mathematical models for addition and subtraction of whole numbers from 0 through 1,000. **(3.1.1K3a)**
- M.3.3.2 ▲ know, explain, and use equivalent representations including the use of mathematical models for addition and subtraction of money. **(3.1.1K3c)**
- M.3.3.3 ▲ solve one-step real-world addition or subtraction problems with whole numbers from 0 to 10,000. **(3.1.4A1a)**
- M.3.3.4 ▲ solve one-step real-world addition or subtraction problems with monetary amounts using dollar and cents through \$500.00 **(3.1.4A1b)**
- M.3.3.5 perform addition of 3 or more addends.
- M.3.3.6 find missing addends.
- M.3.3.7 demonstrate the Associative Property of addition and multiplication. (3.1.2.A1abc-2abc)
- M.3.3.8 demonstrate the Identity Property of addition and multiplication. (3.1.2.A1abc-2abc)
- M.3.3.9 demonstrate the Commutative Property of addition and multiplication. (3.1.2.A1abc-2abc)
- M.3.3.10 demonstrate the Zero Property of addition and multiplication. (3.1.2.A1abc-2abc)
- M.3.3.11 read and write horizontally, vertically, and with different operational symbols the same addition, subtraction, multiplication, or division expression. e.g.,  $4 \cdot 6$  is the same as  $4 \times 6$

**M.3.4 Students will demonstrate number sense for whole numbers and money using concrete objects in a variety of situations. Students will...**

- M.3.4.1 ▲**N** determine the value of mixed coins and bills with a total value of \$50 or less. **(3.1.1K4)**
- M.3.4.2 determine the amount of change owed to \$50. (3.1.1.A3)
- M.3.4.3 solve \$ equations to \$1.00.
- M.3.4.4 estimate to check whether or not the result of a real-world problem using whole numbers from 0 through 1,000 and monetary amounts through \$500 is reasonable and make predictions based on the information. (3.1.3.A2)

**M.3.5 Students will model, explain, and identify multiplication and division fact families through the 5s and the multiplication and division fact families of the 10s. Students will...**

- M.3.5.1 **▲** know, explain, and use equivalent representations including the use of mathematical models for multiplication using the basic facts through the 5s and the multiplication facts of the 10s e.g.  $3 \times 2$  can be represented as  $4 + 2$  or as an array, X X X over X X X. **(3.1.1K3b)**
- M.3.5.2 **N** state and use with efficiency and accuracy multiplication using the basic facts through the 5s and the multiplication facts of the 10s. (3.1.4.K2)  
Practice the basic multiplication facts for the 6s through 9s.
- M.3.5.3 **N** state and use with efficiency and accuracy basic division through the 5s and the basic division facts of the 10s. (3.1.4.K2) Practice the basic division facts for the 6s through 9s.
- M.3.5.4 **▲N** identify multiplication and division fact families through the 5s and the multiplication and division fact families of the 10s. e.g., when given  $6 \times \square = 18$ , the student recognizes the remaining members of the fact family. **(3.1.4.K7)**
- M.3.5.5 perform multiplication of a two-digit number by a one-digit number. (3.1.4.K4b)
- M.3.5.6 perform multiplication of a three-digit number by a one-digit number.
- M.3.5.7 perform division by dividing a one- or two-digit number by a one-digit number with or without remainders. (3.1.4.K5)
- M.3.5.8 demonstrate an understanding of multiplication and division with the use of input/output tables. (3.2.3.A2)

**M.3.6 Students will estimate and measure using standard and nonstandard units of measure with concrete objects in a variety of situations.**

Students will ...

- M.3.6.1 ▲ solve real-world problems by applying appropriate measurements:
- ▲ length to the nearest inch, foot, or yard. e.g., Jill has a piece of rope that is 36 inches long and Bob has a piece that is 15 inches long. If they put their pieces together, how long would the piece of rope be? **(3.3.2.A1a)**
  - ▲ length to the nearest centimeter or meter. e.g., A new pencil is about how many centimeters long? **(3.3.2.A1b)**
  - length to the nearest whole unit of a nonstandard unit. e.g., How many paper clips long is a hot dog?
  - temperature to the nearest degree e.g., What would the temperature outside be if it were a good day for swimming?
  - ▲ number of days in a week e.g., If school started 37 weeks ago, how many days of school have passed? **(3.3.2.A1e)**
  - volume to the nearest cup, pint, quart, or gallon
- M.3.6.2 use whole number estimations for length, width, weight, volume, temperature, time, and perimeter using standard and nonstandard units of measurement. **(3.3.2K1)**
- M.3.6.3 ▲ read and tell time to the minute using analog and digital clocks. **(3.3.2.K2)**

**M.3.7 Students will recognize geometric shapes and investigate their properties using concrete objects. Students will ...**

- M.3.7.1 recognize the solids (cubes, rectangular prisms, cylinders, cones, spheres). **(3.3.1.K3)**
- M.3.7.2 ▲ recognize and describe the square, triangle, rhombus, hexagon, parallelogram, and trapezoid from a pattern block set. **(3.3.1K4)**
- M.3.7.3 recognize and identify one transformation (reflection/flip, rotation/turn, and translation/slide) on a two-dimensional figure. **(3.3.3.K2)**
- M.3.7.4 recognize and describe a quadrilateral as any four-sided figure. **(3.3.1.K5)**
- M.3.7.5 use and determine whole number estimations for length, width, weight, volume, temperature, and time. **(3.3.2.K3)**
- M.3.7.6 find the perimeter of squares, rectangles, and triangles given the measurement of all sides. **(3.3.2.K5)**

**M.3.8 Students will use concepts and procedures of data in a variety of situations.** Students will ...

- M.3.8.1 recognize any outcome of a simple event in an experiment or simulation as impossible, possible, certain, likely, unlikely, or equally likely. (3.4.1.K1)
- M.3.8.2 ▲ list some of the possible outcomes of a simple event in an experiment or simulation including the use of concrete objects. **(3.4.1.K2)**
- M.3.8.3 recognize, generate, and explain multiple representations of the same pattern, repeating patterns, growing patterns using function tables. (3.2.1.K4c)
- M.3.8.4 use, plot, and demonstrate a function table to identify and plot ordered pairs in the first quadrant of a coordinate plane. (3.3.4.K3)
- M.3.8.5 record, organize, and display pictographs with a whole symbol or picture representing one, two, five, or one-hundred; frequency tables; horizontal and vertical bar graphs; Venn diagrams or other pictorial displays; line plots, and charts and tables. (3.4.2.K1a-g)
- M.3.8.6 ▲ find these statistical measures of a data set (using these terms) with less than ten data points using whole numbers from 0 through 1,000: **(3.4.2.K3a-d)**
  - a. minimum and maximum data values
  - b. range
  - c. mode (uni-modal only)
  - d. median when data set has an odd number of data points