

# Grade 2

## Mathematical Process Standards MPS

### 1 Problem Solving MPS.PS

1a Make sense of problems and persevere in solving them strategically. MPS.PS.1

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### 2 Representation & Communication MPS.RC

2a Explain ideas using precise and contextually appropriate mathematical language, tools, and models. MPS.RC.1

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### 3 Connections MPS.C

3a Demonstrate a deep and flexible conceptual understanding of mathematical ideas, operations, and relationships while making real-world connections. MPS.C.1

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### 4 Analyze & Justify MPS.AJ

4a Use critical thinking skills to reason both abstractly and quantitatively. MPS.AJ.1

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### 5 Structure & Patterns MPS.SP

5a Identify and apply regularity in repeated reasoning to make generalizations. MPS.SP.1

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## Data, Probability, and Statistical Reasoning 2.DPSR

### 1 Create and answer survey questions, collect and analyze data, and communicate through multiple representations. 2.DPSR.1.

1a Create a survey question and collect data with up to four categories. Create tally charts, picture graphs, dot plots, and bar graphs with a single-unit scale to read the graph, answer questions, and draw conclusions. Limit to one-step add-to, take-from, part-part-whole, and comparison questions. 2.DPSR.1.1

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## Measurement, Geometry, and Spatial Reasoning 2.MGSR

### 1 Describe, estimate, measure, and compare objects in real-world situations using units of length, weight, currency, and time. 2.MGSR.1.

- 1a Select and use appropriate tools to estimate and measure length of an object or distance to the nearest customary unit. Limit to inches, feet, and yards. 2.MGSR.1.1
- 1b Use analog and digital clocks to tell and record time in five-minute intervals, identifying AM and PM. 2.MGSR.1.2
- 1c Determine the value of mixed sets of coins or bills in mathematical and realworld situations and record the value using a ¢ or \$ symbol. Limit to pennies, nickels, dimes, and quarters up to a dollar; one-dollar bills, five-dollar bills, ten-dollar bills, and twenty-dollar bills up to \$100, and add-to or take-from problem types. 2.MGSR.1.3

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**2 Analyze, describe, and manipulate shapes to make sense of their relationships in mathematical and real-world situations.** 2.MGSR.2.

- 2a Identify and describe a given shape in everyday situations to include twodimensional shapes and threedimensional shapes. Limit to triangle, quadrilateral, pentagon, hexagon, octagon, circle, cone, cube, cylinder, rectangular prism, square pyramid, and sphere. 2.MGSR.2.1
  - 2b Classify shapes as polygons or nonpolygons and defend that determination based on their attributes. 2.MGSR.2.2
  - 2c Classify two-dimensional shapes as triangles or quadrilaterals and justify each classification. 2.MGSR.2.3
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**Numerical Reasoning** 2.NR

**1 Represent multi-digit numbers in a variety of ways to build place value understanding.** 2.NR.1.

- 1a Read, write, and represent numbers up to 999 using concrete models, drawings, standard form, base ten language, and equations in expanded form. 2.NR.1.1
  - 1b Represent and explain that whole numbers 1 through 999 are organized into groups of hundreds, tens, and ones, and a digit has a different value depending on its placement. 2.NR.1.2
  - 1c Compose and decompose whole numbers from 1 through 999 in more than one way using hundreds, tens, and ones. Explain and demonstrate each composition or decomposition with the use of concrete models, drawings, and equations. 2.NR.1.3
  - 1d Apply place value reasoning to identify the number that is 10 more, 10 less, 100 more, and 100 less than a given three digit number through 999. 2.NR.1.4
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**2 Explain the relationship between numbers and quantities.** 2.NR.2.

- 2a Count forward and backward by ones, tens, and hundreds from any number within 999 and identify patterns in the sequence. 2.NR.2.1
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**3 Demonstrate the ability to compare quantities of objects and numerals representing quantities of objects.** 2.NR.3.

- 3a Compare representations of whole numbers up to 999 and write a comparison statement using words and symbols. Limit to is equal to ( $=$ ), is less than ( $<$ ), and/or is greater than ( $>$ ). 2.NR.3.1
- 3b When given a two-digit number, identify which multiple of 10 the number is closest to. 2.NR.3.2

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**4 Represent and compare partitioned shapes in multiple ways using part-whole relationships.** 2.NR.4

- 4a Partition in multiple ways squares, rectangles, and circles into two or four equal sized parts, and describe the parts using the words halves, fourths, a half of, and a fourth of (not quarters). 2.NR.4.1
  - 4b Explain that when partitioning a square, rectangle, or circle into two or four equal parts, the parts become smaller as the number of parts increases. 2.NR.4.2
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**Patterns, Algebra, and Functional Reasoning** 2.PAFR

**1 Understand and apply properties of operations and the relationship between addition and subtraction to solve problems.** 2.PAFR.1.

- 1a Use a strategy to accurately find sums and differences of two-digit numbers within 100 and justify the sum or difference. 2.PAFR.1.1
  - 1b Determine and explain if an equation (within 20) is true using a variety of equation formats. 2.PAFR.1.2
  - 1c Solve one-step add-to, take-from, part-part-whole, and additive comparison real-world situations through 99 with the unknown in any position. 2.PAFR.1.3
  - 1d For any number from 0 to 99, find the number that makes 100 when added to the given number. 2.PAFR.1.4
  - 1e Add and subtract number combinations flexibly and accurately within 20. 2.PAFR.1.5
  - 1f Apply the Associative Property of Addition to find the sum (through 20) of three addends and explain that the value can be found using various grouping strategies. 2.PAFR.1.6
  - 1g Determine the unknown number in addition and subtraction equations within 20, with the unknown in any position. 2.PAFR.1.7
  - 1h Sort a collection of 20 or fewer objects into two groups to determine if the number of objects is even or odd. 2.PAFR.1.8
  - 1i Find the total number of objects arranged in equal groups or in a rectangular array and write an addition equation to express the total as a sum (up to 25) of equal addends. 2.PAFR.1.9
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**2 Recognize, describe, extend, and create patterns.** 2.PAFR.2.

- 2a Describe, extend, and create a growing shape pattern with up to three terms within a sequence. 2.PAFR.2.1
- 2b Create, describe, and extend an appropriate one-step rule for number patterns using addition and subtraction within 100. 2.PAFR.2.2