# Frog Math

## Grades K-3

### Grade Level Expectations for the Sunshine State Standards

## MATH- Kindergarten

### Strand A: Number Sense, Concepts, and Operations

**Standard 1:** The student understands the different ways numbers are represented and used in the real world.

**Benchmarks**
- MA.A. 1.1.1a Associates verbal names and standard numerals with the whole numbers less than 20.
- MA.A. 1.1.1b Uses objects to complete one-to-one correspondence and conservation of number tasks.
- MA.A. 1.1.2 Understands the relative size of whole numbers between 0 and 20.
- MA.A. 1.1.3 Uses objects to represent whole numbers and relates these numbers to real-world situations.

**Standard 2:** The student understands number systems.

**Benchmark**
- MA.A. 2.1.2 Identifies and extends patterns.

**Standard 4:** The student uses estimation in problem-solving and computation.

**Benchmark**
- MA.A. 4.1.1 Provides and justifies estimates for real-world quantities.

### Strand B: Measurement

**Standard 1:** The student measures quantities in the real world and uses the measures to solve problems.

**Benchmark**
- MA.B. 1.1.2 Uses standard and non-standard units, such as links and blocks to measure real quantities.

**Standard 2:** The student compares, contrasts, and converts within system of measurement (both standard/non-standard and metric/customary).

**Benchmark**
- MA.B. 2.1.1 Uses oral language to make direct comparisons (bigger, smaller, etc.)

**Standard 3:** The student estimates measurements in real-world problem situations.

**Benchmark**
- MA.B. 3.1.1 Uses estimation related words to describe quantity and measurement.

### Strand C: Geometry and Spatial Sense

**Standard 1:** The student describes, draws, identifies, and analyzes two- and three-dimensional shapes.

**Benchmark**
- MA.C.1.1.1 Sorts figures using geometric and spatial vocabulary such as corners, curves, inside, above, etc.

**Standard 2:** The student visualizes and illustrates ways in which shapes can be combined, subdivided, and changed.

**Benchmark**
- MA.C. 2.1.1 Constructs mental and physical images of common geometric figures when given pictures, words, and real-world objects.

**Standard 3:** The student uses coordinate geometry to locate objects in both two-and three-dimensions and to describe objects algebraically.

**Benchmark**
- MA.C. 3.1.1 Describes orally and compares geometric figures using the number of faces, edges, and corners.
Strand D: Algebraic Thinking

Standard 1: The student describes, analyzes and generalizes a wide variety of patterns, relations, and functions.

Benchmarks

MA.D.1.1.1a Reasons logically to classify and sort physical objects and events according to attributes such as sound, color, texture, size, and sequence of events.

MA.D.1.1.1b Creates and describes various classification schemes related to physical characteristics, sensory attributes, or numeral and geometric concepts.

MA.D. 1.1.2 Extends and creates patterns using rhythm, sound, shape, color, number, and similar objects or events.

Strand E: Data Analysis and Probability

Standard 1: The student understands and uses the tools of data analysis for managing information.

Benchmarks

MA.E. 1.1.1 Builds and discusses graphs made from physical objects.

MA.E. 1.1.2 Uses information on a graph to answer relevant questions.

MA.E. 1.1.3 Describes and discusses graphs and their value in communicating information.

Standard 2: The student identifies patterns and makes predictions from an orderly display of data using concepts of probability and statistics.

Benchmarks

MA.E. 2.1.1 Explores concepts of chance.

MA.E. 2.1.2 Predicts which simple event is more or less likely to occur.

Standard 3: The student uses statistical methods to make inferences and valid arguments about real-world situations.

Benchmark

MA.E. 3.1.1 Collects, classifies, and organizes data using activities familiar to children.

MATH – First Grade

Strand A: Number Sense, Concepts, and Operations

Standard 1: The student understands the different ways numbers are represented and used in the real world.

Benchmark

MA.A.1.1.1 Associates verbal names and standard numerals with whole numbers through 100.

Standard 2: The student understands number systems.

Benchmark

MA.A. 2.1.2 Makes and extends patterns and states the rule for a given pattern.

Standard 4: The student uses estimation in problem solving and computation.

Benchmark

MA.A. 4.1.1 Estimates real-world quantities and explains how the estimate was obtained and justifies the estimate.

Strand B: Measurement

Standard 1: The student measures quantities in the real world and uses the measures to solve problems.

Benchmark

MA.B. 1.1.2 Uses standard and non-standard units such as links or blocks to measure real quantities.

Standard 2: The student compares, contrasts, and converts within systems of measurement (both standard/non-standard and metric/customary).

Benchmark

MA.B. 2.1.1 Uses direct (measured) and indirect (not measured) comparisons to order objects according to some measurable characteristics.
First Grade – Math (continued)

**Strand C: Geometry and Spatial Sense**

Standard 1: The student describes, draws, identifies, and analyzes two- and three-dimensional shapes.

**Benchmark**

MA.C. 1.1.1 Sorts and classifies basic two- and three-dimensional shapes and identifies the attributes used for the classification.

Standard 3: The student uses coordinate geometry to locate objects in both two and three dimensions and to describe objects algebraically.

**Benchmark**

MA.C. 3.1.1 Associates names for common geometric figures with real-world objects and drawings.

**Strand D: Algebraic Thinking**

Standard 1: The student describes, analyzes, and generalizes a wide variety of patterns, relations, and functions.

**Benchmarks**

MA.D. 1.1.1a Reasons logically to classify and sort physical objects and events according to attributes such as sound, color, texture, size, and sequence of events.

MA.D. 1.1.1b Creates and describes various classification schemes related to physical characteristics, sensory attributes, or numeral and geometric concepts.

MA.D. 1.1.2 Extends patterns and creates new patterns using sensory attributes, physical characteristics or numerical and geometric concepts.

**Strand E: Data Analysis and Probability**

Standard 1: The student understands and uses the tools of data analysis for managing information.

**Benchmarks**

MA.E. 1.1.1 Builds and displays pictographs and block graphs using data collected from student activities.

MA.E. 1.1.2 Displays data in a simple model to use the concepts of range and mode.

MA.E. 1.1.3 Collects and organizes data and discusses the information shown on the graph or chart.

Standard 2: The student identifies patterns and makes predictions from an orderly display of data using concepts of probability and statistics.

**Benchmarks**

MA.E. 2.1.1 Understands basic concepts of chance and probability.

MA.E. 2.1.2 Predicts which simple event is more likely, equally likely, or less likely to occur.

**Math – Second Grade**

**Strand A: Number Sense, Concepts, and Operations**

Standard 1: The student understands the way numbers are represented and used in the real world.

**Benchmark**

MA.A. 1.1.3 Uses objects to represent whole numbers or commonly used fractions and relates these numbers to real-world situations.

Standard 2: The student understands numbers systems.

**Benchmark**

MA.A. 2.1.1 Understands and applies the concepts of counting, grouping, and place value with whole numbers between 0 and 100.

Standard 4: The student uses estimation in problem solving and computation.

**Benchmark**

MA.A. 3.1.1 Provides and justifies estimates for real-world quantities.

**Strand B: Measurement**

Standard 1: The student measures quantities in the real world and uses the measures to solve problems.

**Benchmark**

MA.B. 1.1.1 Uses and describes basic measurement concepts
<table>
<thead>
<tr>
<th>Strand C: Geometry and Spatial Sense</th>
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<tbody>
<tr>
<td><strong>Standard 1:</strong> The student describes, draws, identifies, and analyzes two- and three-dimensional shapes.</td>
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<td><strong>Benchmark</strong></td>
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<tr>
<td>MA.C. 1.1.1  Understands and describes the characteristics of basic two- and three-dimensional shapes.</td>
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<td><strong>Standard 2:</strong> The student visualizes and illustrates ways in which shapes can be combined, subdivided, and changed.</td>
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<td><strong>Benchmarks</strong></td>
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<tr>
<td>MA.C. 2.1.1  Understands basic concepts of spatial relationships, symmetry, and reflections.</td>
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<td>MA.C. 2.1.2  Uses objects to perform geometric transformations, including flips, slides, and turns.</td>
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<td><strong>Standard 3:</strong> The student uses coordinate geometry to locate objects in both two and three dimensions and to describe objects algebraically.</td>
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<td><strong>Benchmark</strong></td>
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<tr>
<td>MA.C. 3.1.1  Uses real-life experiences and physical materials to describe, classify, compare, and sort geometric figures, including squares, rectangles, triangles, circles, cubes, rectangular solids, spheres, pyramids, cylinders, and prisms, according to the number of faces, edges, bases, and corners.</td>
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<td><strong>Standard 1:</strong> The student describes, analyzes, and generalizes a wide variety of patterns, relations, and functions.</td>
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<td><strong>Benchmarks</strong></td>
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<tr>
<td>MA.D. 1.1.1  Describes a wide variety of classification schemes and patterns related to physical characteristics and sensory attributes, such as rhythm, sound, shapes, colors, numbers, similar objects, similar events.</td>
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<td>MA.D. 1.1.2  Recognizes, extends, generalizes, and creates a wide variety of patterns and relationships using symbols and objects.</td>
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<th>Strand E: Data Analysis and Probability</th>
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<td><strong>Standard 1:</strong> The student understands and uses the tools of data analysis for managing information.</td>
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<td><strong>Benchmarks</strong></td>
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<tr>
<td>MA.E. 1.1.1  Displays solutions to problems by generating, collecting, organizing, and analyzing data using simple graphs and charts.</td>
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<td>MA.E. 1.1.2  Displays data in a simple model to use the concepts of range, median, and mode.</td>
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<td><strong>Standard 2:</strong> The student identifies patterns and makes predictions from an orderly display of data using concepts of probability and statistics.</td>
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<td>MA.E. 2.1.1  Understands basic concepts of chance and probability.</td>
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<td>MA.E. 2.1.2  Predicts which simple event is more likely, equally likely, or less likely to occur.</td>
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<td><strong>Standard 3:</strong> The student uses statistical methods to make inferences and valid arguments about real-world situations.</td>
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<td><strong>Benchmark</strong></td>
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<td>MA.E. 3.1.1  Designs simple experiments to answer class questions, collects appropriate information, interprets results using graphical displays of information such as line graphs, pictographs, bar graphs, and charts.</td>
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**Third Grade – Math**

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<tr>
<th>Strand A: Number Sense, Concepts, and Operations</th>
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<td><strong>Standard 4:</strong> The student uses estimation in problem solving and computation.</td>
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<tr>
<td><strong>Benchmark</strong></td>
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<tr>
<td>MA.A. 4.2.1  Is introduced to estimating to determine reasonableness of an answer.</td>
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<th>Strand B: Measurement</th>
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<tr>
<td><strong>Standard 2:</strong> The student compares, contrasts, and converts within systems of measurement.</td>
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</table>
Benchmarks
MA.A. 2.2.1 Uses direct (measured) measures to compare measurable characteristics.
MA.B 2.2.2 Selects and uses standard and non-standard units and instruments to measure real objects.

Standard 3: The student estimates measurements in real-world problem situations.

Benchmark
MA. B 3.2.1a Estimates length, weight, capacity in whole standard units and uses appropriate instruments to verify the estimate.

Strand E: Data Analysis and Probability

Standard 1: The student understands and uses the tools of data analysis for managing information.

Benchmarks
MA.E. 1.2.1a Collects and classifies data from real-world problems.
MA.E. 1.2.1b Constructs tables, graphs, and plots using both discrete and continuous measurements and interprets orally and in writing.
MA.E. 1.2.3 Describes conclusions drawn from data, graphs, or plots.

Standard 2: The student identifies patterns and makes predictions from an orderly display of data using concepts of probability and statistics.

Benchmark
MA.E. 2.2.1 Uses models to display possible outcomes and to predict events.

Standard 3: The student uses statistical methods to make inferences and valid arguments about real-world situations.

Benchmarks
MA.E. 3.2.1 Poses simple questions or hypotheses, collects appropriate data, and communicates results using a graph or plot.
MA.E. 3.2.2 Uses statistical information (i.e., graphic displays) to make valid generalizations.