

# Grade Level Expectations for the Sunshine State Standards

## Mathematics Second Grade



FLORIDA DEPARTMENT OF EDUCATION  
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**Sunshine State Standards  
Grade Level Expectations  
Mathematics  
Second Grade**

The second grade student:

*Number Sense, Concepts, and Operations*

- reads and writes numerals to 1000 or more.
- reads and writes number words to “twenty” or higher.
- understands and uses ordinal numbers 1<sup>st</sup> - 100<sup>th</sup> or higher.
- compares and orders whole numbers to 1000 or more using concrete materials, drawings, number lines, symbols (<, =, >), and vocabulary such as more than, equal to, or less than.
- represents real-world applications of whole numbers, to 1000 or more, using concrete materials, drawings, and symbols.
- represents, compares, and explains halves, thirds, quarters, and eighths as part of a whole and part of a set, using concrete materials, drawings, and real-life situations.
- knows that the total of equivalent fractional parts makes a whole (for example, eight eighths equal one whole).
- represents equivalent forms of the same number through the use of concrete materials (including coins), diagrams and number expressions.
- counts to 1000 or more by 2s, 3s, 5s, 10s, 25s, 50s and 100s using a variety of ways, such as mental mathematics, paper and pencil, hundred chart, calculator, and coins in various increments.
- demonstrates the place value groupings of numbers to 1000 or more using concrete materials, pictures, and symbols.
- counts by tens from any given number less than 1000.
- counts forward or backward by one beginning with any number less than 1000.
- counts coins using “mixed” counting (using coin values of 50, 25, 10, 5, and 1).
- counts and groups objects into hundreds, tens, and ones, and relates the groupings to the corresponding written numeral (for example, 4 groups of 100, 2 groups of ten, and 6 ones is 426).
- knows place value patterns using zero as a place holder (for example, trading 10 tens for 100).
- knows the place value of a designated digit in whole numbers to 1000.
- recalls (from memory) the addition facts and corresponding subtraction facts.
- knows the related facts that represent the inverse relationships between addition and subtraction.
- predicts the relative size of solutions in addition and subtraction (for example, adding two whole numbers results in a number that is larger than either of the two original numbers).

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- adds and subtracts two-digit numbers with or without regrouping using models, concrete materials, and algorithms.
- demonstrates knowledge of multiplication (for the repeated addition and array models) using manipulatives, drawings, and story problems.
- demonstrates knowledge of division (for the repeated subtraction and partitive models) using manipulatives, drawings, and story problems.
- solves problems involving addition and subtraction using a variety of strategies (such as drawings, role playing, and working backward) and explains the solution strategy.
- writes and solves number problems with one operation involving addition or subtraction.
- writes number sentences associated with addition and subtraction situations.
- knows appropriate methods (for example, concrete materials, mental mathematics, paper and pencil, calculator) to solve real-world problems involving addition and subtraction.
- chooses and explains the computing method that is more appropriate (that is faster, more accurate, easier) for varied real-world tasks (for example, recall of basic facts is faster than using a calculator whereas recording data from survey results may be easier with a calculator).
- makes predictions of quantities of objects (to 50 or more) and explains the reasoning supporting that prediction (for example, the number of pieces of candy in a large jar may be estimated by finding the number of pieces in a small jar and estimating how many small jars would fill the larger one).
- estimates reasonable solutions for addition and subtraction problems (sums to 100) and explains the procedure used (for example, the sum of 34 and 57 is more than 80 since  $30 + 50$  is 80).
- knows reasonable and unreasonable estimates.
- demonstrates and explains the difference between odd and even numbers using concrete objects or drawings.

*Measurement*

- knows how to communicate measurement concepts.
- demonstrates an understanding of customary and metric measurement of length and distance, selecting appropriate units of measurement (for example, inches, feet, yards, centimeters, meters).
- demonstrates an understanding of customary and metric measurement of weight by selecting appropriate units of measurement (for example, ounces, pounds, grams, kilograms).
- demonstrates an understanding of time using digital and analog clocks (for example, quarter-hour, five-minute intervals).

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- demonstrates an understanding of temperatures using Fahrenheit and Celsius thermometers.
- demonstrates an understanding of capacity by using appropriate units of measurement (for example, ounces, cups, pints, quarts, gallons, liters, milliliters).
- measures length, weight, and capacity of objects using standard and nonstandard units.
- uses nonstandard methods, and customary and metric units to measure, compare, and order objects according to their lengths, weights, or capacities.
- knows that a standard unit of measure is used in real-world situations to describe the measure of an object (for example, length, weight, time, capacity).
- estimates, measures, and compares distances.
- knows the passage of time using minutes, half-hours, and hours.
- knows and compares amounts of money in coins, to one dollar or more.
- selects and uses an appropriate nonstandard unit to measure length, distance, weight, time, and capacity.
- knows appropriate standard tools for measuring linear dimensions, weight, capacity, and temperature.
- knows appropriate tools (clocks and calendar) for measuring time (including days, weeks, months, and years).

*Geometry and Spatial Sense*

- describes attributes of two- and three-dimensional shapes using mathematical language (for example, curves, vertices, edges, faces, angles).
- sorts two- and three-dimensional figures according to their attributes.
- knows the names of both two-dimensional and three-dimensional figures presented in various orientations in the environment.
- describes symmetry in two-dimensional shapes.
- determines lines of symmetry of two-dimensional shapes by using concrete materials.
- knows congruent shapes.
- identifies shapes that can be combined or separated (for example, a rectangle can be separated into two triangles).
- predicts the reflection of a given two-dimensional shape.
- identifies and demonstrates slides, flips, and turns of simple figures using concrete materials.
- compares and contrasts two- and three-dimensional real-life objects (for example, circle and sphere, square and cube, triangle and pyramid, rectangle and rectangular solid).

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- describes and classifies two-dimensional shapes and three-dimensional geometric objects according to the number of bases, faces, edges, and vertices.
- locates and explains known and unknown numbers to 1000 or more on a number line.
- locates and identifies the coordinate points of objects on a coordinate grid (first quadrant).

*Algebraic Thinking*

- recognizes that patterning results from repeating an operation, using a transformation, or making some other change to an attribute.
- describes a given pattern and explains the pattern rule.
- identifies number patterns using a hundred chart or a calculator.
- predicts, extends, and creates patterns that are concrete, pictorial or numerical.
- combines two attributes in creating a pattern (for example, size and color).
- transfers patterns from one medium to another (for example, pictorial to symbolic).
- identifies patterns in the real-world (for example, repeating, rotational, tessellating, and patchwork).
- identifies and generates patterns in a list of related number pairs based on real-life situations (for example, T-chart with number of tricycles to number of wheels).

Number of Tricycles	Number of Wheels
1	3
2	6

- explains generalizations of patterns and relationships.
- solves a variety of number sentences where the missing number is represented by a geometric shape (for example,  $10 - \square = 6$ ).
- solves a variety of number sentences with equalities and inequalities (using the symbols  $>$ ,  $=$ ,  $<$ ).
- uses concrete objects, paper and pencil, or mental mathematics to solve real-world equations with one unknown (such as, There are 28 students in the room, and 16 brought their lunches. How many are buying lunch?).

*Data Analysis and Probability*

- poses questions and collects data to answer questions with two, three, or more categories or choices (for example, favorite ice cream, left handed/right handed).
- uses mathematical language to read and interpret data on a simple concrete graph, pictorial graph, or chart.
- uses concrete materials, pictures, graphs, or tally marks to display data and identify range, mode, and median.

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- predicts the outcome for a larger population by analyzing data from a smaller group.
- uses a calculator to compare data.
- constructs a graph using computer software.
- knows if an event is certain, probable, or impossible.
- records results of activities involving chance and makes predictions based upon data (for example, coin flips, number cube rolls, bean toss on area divided into unequal portions).
- knows if a given event is equally likely, most likely, or least likely to occur (for example, spinners, coin toss, election results).
- collects data for two or more categories and creates a line graph, pictograph, or chart to display results.
- analyzes and explains orally or in writing the results from a survey.
- determines questions for a survey with two, three, or more categories so that the collected information will be relevant to the questions.
- knows appropriate methods to display and interpret information.



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