

# Second Grade – Everyday Mathematics Goals Aligned with NYS Standards

## Strand: NUMBER AND NUMERATION

**Program Goal: Understand the meanings, uses, and representations of numbers.**

Content	EDM Grade Level Goal	NYS Standard(s)
Rote Counting	<b>Goal 1.</b> Count on by 1s, 2s, 5s, 10s, 25, and 100s past 1,000 and back by 1s from any number less than 1,000 with and without number grids, number lines, and calculators.	<p><b>2.N.1</b> Skip count to 100 by 2's, 5's, 10's</p> <p><b>2.N.2</b> Count back from 100 by 1's, 5's, 10's using a number chart</p> <p><b>2.N.9</b> Name the number before and the number after a given number, and name the number(s) between two given numbers up to 100 (with and without the use of a number line or a hundreds chart)</p> <p><b>2.N.13</b> Recognize the meaning of zero in the place value system (0-100)</p> <p><b>2.A.2</b> Describe and extend increasing or decreasing (=, -) sequences and patterns (numbers or objects up to 100)</p>
Rational Counting		
Place value and notation	<b>Goal 2.</b> Read, write, and model with manipulatives whole numbers up to 10,000; identify places in such numbers and the values of the digits in those places; read and write money amounts in dollars-and-cents notation.	<p><b>2.N.6</b> Develop an understanding of the base ten system: 10 ones = 1 ten / 10 tens = 1 hundred / 10 hundreds = 1 thousand</p> <p><b>2.N.13</b> Recognize the meaning of zero in the place value system (0-100)</p> <p><b>2.M.6</b> Know and recognize coins (penny, nickel, dime, quarter) and bills (\$1, \$5, \$10, and \$20)</p> <p><b>2.M.7</b> Recognize the whole dollar notation as \$1, etc.</p> <p><b>2.CM.3</b> Share mathematical ideas through the manipulation of objects, drawings, pictures, charts, and symbols in both written and verbal explanations</p> <p><b>2.CN.7</b> Recognize the presence of mathematics in their daily lives</p>
Meanings and uses of fractions	<b>Goal 3.</b> Use manipulatives and drawings to model fractions as equal parts of a region or a collection; describe the models and name the fractions.	<p><b>2.R.6</b> Use mathematics to show and understand social phenomena (i.e., count and represent sharing cookies between friends)</p> <p><b>2.N.21</b> Develop readiness for division by using repeated subtraction, dividing objects into groups (fair share)</p> <p><b>2.PS.9</b> Use drawings/pictures to model the action in problems</p> <p><b>2.RP.2</b> Recognize that mathematical ideas need to be supported by evidence</p> <p><b>2.CM.3</b> Share mathematical ideas through the manipulation of objects, drawings, pictures, charts, and symbols in both written and verbal explanations</p> <p><b>2.CN.4</b> Recognize how models of situations involving objects, pictures, and symbols relate to mathematical ideas</p> <p><b>2.CN.6</b> Understand how mathematical models represent quantitative relationships</p>
Number theory	<b>Goal 4.</b> Recognize numbers as odd or even.	<p><b>2.N.14</b> Use concrete materials to justify a number as odd or even</p> <p><b>2.PS.3</b> Act out or model with manipulatives activities involving mathematical content from literature and/or story telling</p> <p><b>2.RP.2</b> Recognize that mathematical ideas need to be supported by evidence</p> <p><b>2.CN.2</b> Understand and use the connections between numbers and the quantities they represent to solve problems</p>

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Program Goal: Understand equivalent names for numbers.

Content	EDM Grade Level Goal	NYS Standard(s)
Equivalent names for whole numbers	<b>Goal 5.</b> Use tally marks, arrays, and numerical expressions involving addition and subtraction to give equivalent names for whole numbers.	<p><b>2.N.7</b> Use a variety of strategies to compose and decompose two-digit numbers</p> <p><b>2.N.8</b> Understand the commutative property of addition (Turn-Around-Facts)</p> <p><b>2.N.12</b> Use zero as the identity element for addition</p> <p><b>2.N.15</b> Determine sums and differences of number sentences by various means (i.e., families, related facts, inverse operations, addition doubles, and doubles plus one)</p> <p><b>2.N.17</b> Demonstrate fluency and apply addition and subtraction facts up to and including 18</p> <p><b>2.CM.3</b> Share mathematical ideas through the manipulation of objects, drawings, pictures, charts, and symbols in both written and verbal explanations</p> <p><b>2.CN.4</b> Recognize how models of situations involving objects, pictures, and symbols relate to mathematical ideas</p> <p><b>2.CN.6</b> Understand how mathematical models represent quantitative relationships</p> <p><b>2.R.1</b> Use multiple representations, including verbal and written language, acting out or modeling a situation, drawings, and/or symbols as representations</p>
Equivalent names for fractions, decimals, and percents	<b>Goal 6.</b> Use manipulatives and drawings to model equivalent names for $\frac{1}{2}$ .	<p><b>2.G.6</b> Explore line symmetry</p> <p><b>2.PS.3</b> Act out or model with manipulatives activities involving mathematical content from literature and/or story telling</p> <p><b>2.PS.8</b> Use manipulatives (i.e., tiles, blocks) to model the action in problems</p> <p><b>2.R.1</b> Use multiple representations, including verbal and written language, acting out or modeling a situation, drawings, and/or symbols as representations</p> <p><b>2.R.7</b> Use mathematics to show and understand mathematical phenomena (i.e., draw pictures to show a story problem or show number value using fingers on your hand)</p>

Program Goal: Understand common numerical relations.

Content	EDM Grade Level Goal	NYS Standard(s)
Comparing and ordering numbers	<b>Goal 7.</b> Compare and order whole numbers up to 10,000; use area models to compare fractions.	<p><b>2.N.5</b> Compare and order numbers to 100</p> <p><b>2.N.9</b> Name the number before and the number after a given number, and name the number(s) between two given numbers up to 100 (with and without the use of a number line or a hundreds chart)</p> <p><b>2.CM.3</b> Share mathematical ideas through the manipulation of objects, drawings, pictures, charts, and symbols in both written and verbal explanations</p>

**Number & Numeration Indicators not appearing in EDM Goals:**

Number Systems	None listed	<p><b>2.N.10</b> Use and Understand verbal ordinal terms</p> <p><b>2.N.11</b> Read written ordinal terms (first through ninth) and use them to represent ordinal relations</p>
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## Strand: OPERATIONS AND COMPUTATIONS

Program Goal: Compute accurately.

Content	EDM Grade Level Goal	NYS Standard(s)
Addition and subtraction facts	<b>Goal 1.</b> Demonstrate automaticity with $+/ - 0$ , $+/ - 1$ , doubles, and sum-equals-ten facts, and proficiency with all addition and subtraction facts through $10 + 10$ .	<p><b>2.N.7</b> Use a variety of strategies to compose and decompose two-digit numbers</p> <p><b>2.N.12</b> Use zero as the identity element for addition</p> <p><b>2.N.13</b> Recognize the meaning of zero in the place value system (0-100)</p> <p><b>2.N.17</b> Demonstrate fluency and apply addition and subtraction facts up to and including 18</p> <p><b>2.N.18</b> Use doubles to add 2-digit numbers</p> <p><b>2.CN.5</b> Understand the meanings of operations and how they relate to one another</p>

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Addition and subtraction procedures	<p><b>Goal 2.</b> Use manipulatives, number grids, tally marks, mental arithmetic, paper and pencil, and calculators to solve problems involving the addition and subtraction of whole numbers; describe the strategies used; calculate and compare values of coin and bill combinations.</p>	<p><b>2.N.7</b> Use a variety of strategies to compose and decompose two-digit numbers  <b>2.N.8</b> Understand the commutative property of addition (Turn-Around-Facts)  <b>1.N.24</b> Develop and use strategies to solve addition and subtraction word problems  <b>2.N.12</b> Use zero as the identity element for addition  <b>2.N.16</b> Use a variety of strategies to solve addition and subtraction problems using one- and two-digit numbers with and without regrouping  <b>2.N.17</b> Demonstrate fluency and apply addition and subtraction facts up to and including 18  <b>2.N.18</b> Use doubles to add 2-digit numbers  <b>2.N.19</b> Use compensation to add 2-digit numbers  <b>2.N.15</b> Determine sums and differences of number sentences by various means (i.e., families, related facts, inverse operations, addition doubles, and doubles plus one)  <b>2.M.8</b> Identify equivalent combinations to make one dollar  <b>2.PS.8</b> Use manipulatives (i.e., tiles, blocks) to model the action in problems  <b>2.CM.2</b> Verbally support their reasoning and answer  <b>2.CM.3</b> Share mathematical ideas through the manipulation of objects, drawings, pictures, charts, and symbols in both written and verbal explanations  <b>2.CM.6</b> Use appropriate mathematical terms, vocabulary, and language  <b>2.CN.4</b> Understand how models of situations involving objects, pictures, and symbols relate to mathematical ideas  <b>2.CN.5</b> Understand the meanings of operations and how they relate to one another</p>
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### Program Goal: Make reasonable estimates.

Content	EDM Grade Level Goal	NYS Standard(s)
Computational estimations	<p><b>Goal 3.</b> Make reasonable estimates for whole number addition and subtraction problems; explain how the estimates were obtained.</p>	<p><b>2.PS.5</b> Use informal counting strategies to find solutions  <b>2.PS.7</b> Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking  <b>2.RP.3</b> Investigate the use of knowledgeable guessing as a mathematical tool  <b>2.RP.4</b> Explore guesses, using a variety of objects and manipulatives  <b>2.CM.1</b> Understand how to organize their thought processes  <b>2.CM.2</b> Verbally support their reasoning and answer  <b>2.CN.2</b> Understand and use the connections between numbers and the quantities they represent to solve problems</p>

### Number & Numeration Indicators not appearing in EDM Goals:

<i>Estimation</i>	<i>None listed</i>	<b>2.N.22</b> Estimate the number in a collection to 100 and then compare by counting the actual items in the collection
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### Program Goal: Understand meanings of operations.

Content	EDM Grade Level Goal	NYS Standard(s)
Models for the operations	<p><b>Goal 4.</b> Identify and describe change, comparison, and parts-and-total situations; use repeated addition, arrays, and skip counting to model multiplication; use equal sharing and equal grouping to model division.</p>	<p><b>2.N.1</b> Skip count to 100 by 2's, 5's, 10's  <b>2.N.2</b> Count back from 100 by 1's, 5's, 10's using a number chart  <b>2.N.3</b> Skip count by 3's to 36 for multiplication readiness  <b>2.N.4</b> Skip count by 4's to 48 for multiplication readiness  <b>2.N.20</b> Develop readiness for multiplication by using repeated addition  <b>2.N.21</b> Develop readiness for division by using repeated subtraction, dividing objects into groups (fair share)  <b>2.CN.2</b> Understand and use the connections between numbers and the quantities they represent to solve problems  <b>2.CN.5</b> Understand the meanings of operations and how they relate to one another  <b>2.CN.6</b> Understand how mathematical models represent quantitative relationships</p>

## Second Grade – Everyday Mathematics Goals Aligned with NYS Standards

### Strand: PATTERNS, FUNCTIONS, AND ALGEBRA

Program Goal: Understand patterns and functions.

Content	EDM Grade Level Goal	NYS Standard(s)
Patterns and functions	<b>Goal 1.</b> Extend, describe, and create numeric, visual, and concrete patterns; describe rules for patterns and use them to solve problems; use words and symbols to describe and write rules for functions involving addition and subtraction and use those rules to solve problems.	<b>2.A.2</b> Describe and extend increasing or decreasing (+, -) sequences and patterns (numbers or objects up to 100) <b>2.N.1</b> Skip count to 100 by 2's, 5's, 10's <b>2.N.2</b> Count back from 100 by 1's, 5's, 10's using a number chart <b>2.N.3</b> Skip count by 3's to 36 for multiplication readiness <b>2.N.4</b> Skip count by 4's to 48 for multiplication readiness <b>2.CN.1</b> Recognize connections of patterns in their everyday experiences to mathematical ideas

Program Goal: Use algebraic notation to represent and analyze situations and structures.

Content	EDM Grade Level Goal	NYS Standard(s)
Algebraic notation and solving number sentences	<b>Goal 2.</b> Read, write, and explain expressions and number sentences using the symbols +, -, =, >, and, <; solve number sentences involving addition and subtraction; write expressions and number sentences to model number stories.	<b>1.A.1</b> Use the symbols <, >, = (with and without the use of a number line) to compare whole numbers up to 100 <b>2.CM.6</b> Understand how mathematical models represent quantitative relationships
Properties of arithmetic operations	<b>Goal 3.</b> Describe the Commutative and Associative Properties of Addition and apply them to mental arithmetic problems.	<b>2.N.8</b> Understand the commutative property of addition (Turn-Around-Facts) <b>2.CM.6</b> Understand how mathematical models represent quantitative relationships

### Strand: GEOMETRY

Program Goal: Investigate characteristics and properties of two- and three-dimensional geometric shapes.

Content	EDM Grade Level Goal	NYS Standard(s)
Lines and angles	<b>Goal 1.</b> Draw line segments and identify parallel line segments.	<b>2.CM.3</b> Share mathematical ideas through the manipulation of objects, drawings, pictures, charts, and symbols in both written and verbal explanations
Plane and solid figures	<b>Goal 2.</b> Identify, describe, and model plane and solid figures including circles, triangles, squares, rectangles, hexagons, trapezoids, rhombuses, spheres, cylinders, rectangular prisms, pyramids, cones, and cubes.	<b>2.G.2</b> Identify and appropriately name two-dimensional shapes: circle, square, rectangle, and triangle (both regular and irregular) <b>2.G.3</b> Compose (put together) and decompose (break apart) two-dimensional shapes <b>2.G.4</b> Group objects by like properties <b>2.CM.3</b> Share mathematical ideas through the manipulation of objects, drawings, pictures, charts, and symbols in both written and verbal explanations <b>2.CM.6</b> Understand how mathematical models represent quantitative relationships

Program Goal: Apply transformations and symmetry in geometric situations.

Content	EDM Grade Level Goal	NYS Standard(s)
Transformations and symmetry	<b>Goal 3.</b> Create and complete two-dimensional symmetric shapes or designs.	<b>2.G.1</b> Experiment with slides, flips, and turns to compare two-dimensional shapes <b>2.G.2</b> Identify and appropriately name two-dimensional shapes: circle, square, rectangle, and triangle (both regular and irregular) <b>2.G.5</b> Explore and predict the outcome of slides, flips, and turns of two-dimensional shapes <b>2.G.6</b> Explore line symmetry

## Second Grade – Everyday Mathematics Goals Aligned with NYS Standards

### Strand: MEASUREMENT AND REFERENCE FRAMES

**Program Goal: Understand the systems and processes of measurement; use appropriate techniques, tools, units, and formulas in making measurements.**

Content	EDM Grade Level Goal	NYS Standard(s)
Length, weight, and angles	<b>Goal 1.</b> Estimate length with and without tools; measure length to the nearest inch and centimeter; use standard and nonstandard tools to measure and estimate weight.	<b>2.M.1</b> Use non-standard and standard units to measure both vertical and horizontal lengths <b>2.M.2</b> Use a ruler to measure standard units (including whole inches and whole feet) <b>2.M.3</b> Compare and order objects according to the attribute of length <b>2.M.10</b> Select and use standard (customary and non-standard units to estimate measurements
Area, perimeter, volume, and capacity	<b>Goal 2.</b> Count unit squares to find the area of rectangles.	<b>2.CM.3</b> Share mathematical ideas through the manipulation of objects, drawings, pictures, charts, and symbols in both written and verbal explanations <b>2.R.1</b> Use multiple representations, including verbal and written language, acting out or modeling a situation, drawings, and/or symbols as representations
Units and systems of measurement	<b>Goal 3.</b> Describe relationships between days in a week and hours in a day.	<b>2.PS.4</b> Formulate problems and solutions from everyday situations (i.e., counting the number of children in the class, using the calendar to teach counting) <b>2.CN.7</b> Recognize the presence of mathematics in their everyday lives
Money	<b>Goal 4.</b> Make exchanges between coins and bills.	<b>2.M.6</b> Know and recognize coins (penny, nickel, dime, quarter) and bills (\$1, \$5, \$10, and \$20) <b>2.M.7</b> Recognize the whole dollar notation as \$1, etc. <b>2.M.8</b> Identify equivalent combinations to make one dollar

**Program Goal: Use and understand reference frames.**

Content	EDM Grade Level Goal	NYS Standard(s)
Temperature	<b>Goal 5.</b> Read temperature on both the Fahrenheit and Celsius scales.	<b>2.CN.4</b> Understand how models of situations involving objects, pictures, and symbols relate to mathematical ideas
Time	<b>Goal 6.</b> Tell and show time to the nearest five minutes on an analog clock; tell and write time in digital notation.	<b>2.M.9</b> Tell time to the half hour and five minutes using both digital and analog clocks

**Measurement Indicators not appearing in EDM Goals:**

<i>Units of Measurement</i>	<i>None listed</i>	<b>2.M.4</b> Recognize mass as a qualitative measure (i.e., Which is heavier? Which is lighter?) <b>2.M.5</b> Compare and order objects, using lighter than and heavier than
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### Strand: DATA AND CHANCE

**Program Goal: Select and create appropriate graphical representations of collected or given data.**

Content	EDM Grade Level Goal	NYS Standard(s)
Data collection and representation	<b>Goal 1.</b> Collect and organize data or use given data to create tally charts, tables, bar graphs, and line plots.	<b>2.S.1</b> Formulate questions about themselves and their surroundings <b>2.S.2</b> Collect and record data (using tallies) related to the question <b>2.S.3</b> Display data in pictographs and bar graphs using concrete objects or a representation of the object

**Program Goal: Analyze and interpret data.**

Content	EDM Grade Level Goal	NYS Standard(s)
Data Analysis	<b>Goal 2.</b> Use graphs to ask and answer simple questions and draw conclusions; find the maximum, minimum, mode, and median of a data set.	<b>2.S.4</b> Compare and interpret data in terms of describing quantity (similarity or differences) <b>2.S.5</b> Discuss conclusion and make predictions from graphs <b>2.CM.5</b> Formulate mathematically relevant questions

**Program Goal: Understand and apply basic concepts of probability.**

Content	EDM Grade Level Goal	NYS Standard(s)
Qualitative probability	<b>Goal 3.</b> Describe events using <i>certain</i> , <i>likely</i> , <i>unlikely</i> , <i>impossible</i> and other basic probability terms; explain the choice of language.	<b>1.S.8</b> Discuss conclusions and make predictions in terms of the words likely and unlikely