### NCTM Curriculum Focal Points for Grade 1

#### Everyday Mathematics Grade 1 Teacher's Lesson Guide Pages

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<tr>
<th>Number and Operations and Algebra: Developing understandings of addition and subtraction and strategies for basic addition facts and related subtraction facts</th>
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<td>Children develop strategies for adding and subtracting whole numbers on the basis of their earlier work with small numbers.</td>
<td>Operations and Computation Goal 1&lt;br&gt;Demonstrate proficiency with $+/-0$, $+/-1$, doubles, and sum-equals-ten addition and subtraction facts such as $6 + 4 = 10$ and $10 - 7 = 3$.</td>
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<td>Operations and Computation Goal 2&lt;br&gt;Use manipulatives, number grids, tally marks, mental arithmetic, and calculators to solve problems involving the addition and subtraction of 1-digit whole numbers with 1- or 2-digit whole numbers; calculate and compare the values of combinations of coins.</td>
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<td>Children use a variety of models, including discrete objects, length-based models (e.g., lengths of connecting cubes), and number lines, to model “part-whole,” “adding to,” “taking away from,” and “comparing” situations to develop an understanding of the meanings of addition and subtraction and strategies to solve such arithmetic problems.</td>
<td>Operations and Computation Goal 3&lt;br&gt;Estimate reasonableness of answers to basic fact problems (e.g., Will $7 + 8$ be more or less than 10?).</td>
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<td>Operations and Computation Goal 4&lt;br&gt;Identify change-to-more, change-to-less, comparison, and parts-and-total situations.</td>
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<td>Patterns, Functions, and Algebra Goal 3&lt;br&gt;Apply the Commutative Property of Addition and the Additive Identity to basic addition fact problems.</td>
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<td></td>
<td>Number and Numeration Goal 6&lt;br&gt;Use manipulatives, drawings, tally marks, and numerical expressions involving addition and subtraction of 1- or 2-digit numbers to give equivalent names for whole numbers up to 100.</td>
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Identify change-to-more, change-to-less, comparison, and parts-and-total situations. |
| Children understand the connections between counting and the operations of addition and subtraction (e.g., adding two is the same as “counting on” two). | 145–149, 209–213, 219–223, 224–228, 229–234, 698–702 | Patterns, Functions, and Algebra Goal 2
Read, write, and explain expressions and number sentences using the symbols +, –, and = and the symbols > and < with cues; solve equations involving addition and subtraction. |
| Children use properties of addition (commutativity and associativity) to add whole numbers, and they create and use increasingly sophisticated strategies based on these properties (e.g., “making tens”) to solve addition and subtraction problems involving basic facts. | 402–408, 548–552, 557, 559–562 | Number and Numeration Goal 1
Count on by 1s, 2s, 5s, and 10s past 100 and back by 1s from any number less than 100 with and without number grids, number lines, and calculators. |
| By comparing a variety of solution strategies, children relate addition and subtraction as inverse operations. | 548–552, 553–558, 559–562, 574–579, 693–697, 758–762, 829 | Patterns, Functions, and Algebra Goal 3
Apply the Commutative Property of Addition and the Additive Identity to basic addition fact problems. |

**Number and Operations:** Developing an understanding of whole number relationships, including grouping in tens and ones

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| Children compare and order whole numbers (at least to 100) to develop an understanding of and solve problems involving the relative sizes of these numbers. | 20–24, 37–41, 52–55, 56–59, 324–329, 368–373, 384–387, 388–392, 816–821 | Number and Numeration Goal 7
Compare and order whole numbers up to 1,000. |
| | | Patterns, Functions, and Algebra Goal 2
Read, write, and explain expressions and number sentences using the symbols +, –, and = and the symbols > and < with cues; solve equations involving addition and subtraction. |
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<td>Children think of whole numbers between 10 and 100 in terms of groups of tens and ones (especially recognizing the numbers 11 to 19 as 1 group of ten and particular numbers of ones).</td>
<td>358–362, 363–367, 379–383, 685, 688–692, 742–746, 753–757, 832–838</td>
<td>Number and Numeration Goal 3 Read, write, and model with manipulatives whole numbers up to 1,000; identify places in such numbers and the values of the digits in those places.</td>
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<td>Children understand the sequential order of the counting numbers and their relative magnitudes and represent numbers on a number line.</td>
<td>20–24, 33–36, 94–98, 119–123, 204–208, 587–592</td>
<td>Number and Numeration Goal 1 Count on by 1s, 2s, 5s, and 10s past 100 and back by 1s from any number less than 100 with and without number grids, number lines, and calculators.</td>
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<td><strong>Geometry:</strong> Composing and decomposing geometric shapes</td>
<td>644–648, 649–653, 703–708, 709–713, 768–773, 774–777, 778–782, 826</td>
<td>Number and Numeration Goal 4 Use manipulatives and drawings to model halves, thirds, and fourths as equal parts of a region or a collection; describe the model.</td>
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<td>Children compose and decompose plane and solid figures (e.g., by putting two congruent isosceles triangles together to make a rhombus), thus building an understanding of part-whole relationships as well as the properties of the original and composite shapes.</td>
<td>644–648, 649–653, 654–657</td>
<td>Geometry Goal 1 Identify and describe plane and solid figures including circles, triangles, squares, rectangles, spheres, cylinders, rectangular prisms, pyramids, cones, and cubes.</td>
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<td>As children combine figures, they recognize them from different perspectives and orientations, describe their geometric attributes and properties, and determine how they are alike and different, in the process developing a background for measurement and initial understandings of such properties as congruence and symmetry.</td>
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<td>Geometry Goal 2 Identify shapes having line symmetry; complete line-symmetric shapes or designs.</td>
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<td><strong>NCTM Connections to the Focal Points for Grade 1</strong></td>
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<td><strong>Number and Operations and Algebra</strong></td>
<td>379–383, 747–752, 753–757, 758–762, 813, 817, 827–831</td>
<td>Number and Numeration Goal 3 Read, write, and model with manipulatives whole numbers up to 1,000; identify places in such numbers and the values of the digits in those places.</td>
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| Children use mathematical reasoning, including ideas such as commutativity and associativity and beginning ideas of tens and ones, to solve two-digit addition and subtraction problems with strategies that they understand and can explain. | 379–383, 747–752, 753–757, 758–762, 813, 817, 827–831 | Number and Numeration Goal 6
Use manipulatives, drawings, tally marks, and numerical expressions involving addition and subtraction of 1- or 2-digit numbers to give equivalent names for whole numbers up to 100. |
| Operations and Computation Goal 2
Use manipulatives, number grids, tally marks, mental arithmetic, and calculators to solve problems involving the addition and subtraction of 1-digit whole numbers with 1- or 2-digit whole numbers; calculate and compare the values of combinations of coins. |
| Patterns, Functions, and Algebra Goal 2
Read, write, and explain expressions and number sentences using the symbols +, −, and = and the symbols > and < with cues; solve equations involving addition and subtraction. |
| Measurements and Reference Frames Goal 3
Identify a thermometer as a tool for measuring temperature; read temperatures on Fahrenheit and Celsius thermometers to the nearest 10°. |
| Patterns, Functions, and Algebra Goal 1
| Patterns, Functions, and Algebra Goal 2
Read, write, and explain expressions and number sentences using the symbols +, −, and = and the symbols > and < with cues; solve equations involving addition and subtraction. |
Read, write, and model with manipulatives whole numbers up to 1,000; identify places in such numbers and the values of the digits in those places. |
| Number and Numeration Goal 6
Use manipulatives, drawings, tally marks, and numerical expressions involving addition and subtraction of 1- or 2-digit numbers to give equivalent names for whole numbers up to 100. |
| Operations and Computation Goal 2
Use manipulatives, number grids, tally marks, mental arithmetic, and calculators to solve problems involving the addition and subtraction of 1-digit whole numbers with 1- or 2-digit whole numbers; calculate and compare the values of combinations of coins. |
| Measurement and Reference Frames Goal 3
Identify a thermometer as a tool for measuring temperature; read temperatures on Fahrenheit and Celsius thermometers to the nearest 10°. |
| Patterns, Functions, and Algebra Goal 1
| Patterns, Functions, and Algebra Goal 2
Read, write, and explain expressions and number sentences using the symbols +, −, and = and the symbols > and < with cues; solve equations involving addition and subtraction. |
## NCTM Connections to the Focal Points for Grade 1

### Everyday Mathematics Grade 1 Teacher’s Lesson Guide Pages

### Everyday Mathematics Grade 1 Grade-Level Goals

### Measurement and Data Analysis
- **Children strengthen their sense of number by solving problems involving measurements and data.**
  - Data and Chance Goal 1: Collect and organize data to create tally charts, tables, bar graphs, and line plots.
  - Data and Chance Goal 2: Use graphs to answer simple questions and draw conclusions; find the maximum and minimum of a data set.
  - Measurement and Reference Frames Goal 1: Use nonstandard tools and techniques to estimate and compare weight and length; measure length with standard measuring tools.

### Measurement and Reference Frames Goal 1
- Measuring by laying multiple copies of a unit end to end and then counting the units by using groups of tens and ones supports children’s understanding of number lines and number relationships.
- Representing measurements and discrete data in picture and bar graphs involves counting and comparisons that provide another meaningful connection to number relationships.
  - Pages: 310, 597–603, 850, 861

### Algebra
- Through identifying, describing, and applying number patterns and properties in developing strategies for basic facts, children learn about other properties of numbers and operations, such as odd and even (e.g., “Even numbers of objects can be paired, with none left over”), and 0 as the identity element for addition.
  - Number and Numeration Goal 1: Count on by 1s, 2s, 5s, and 10s past 100 and back by 1s from any number less than 100 with and without number grids, number lines, and calculators.
  - Number and Numeration Goal 5: Use manipulatives to identify and model odd and even numbers.
  - Operations and Computation Goal 1: Demonstrate proficiency with +/− 0, +/− 1, doubles, and sum-equals-ten addition and subtraction facts such as 6 + 4 = 10 and 10 − 7 = 3.
  - Patterns, Functions, and Algebra Goal 3: Apply the Commutative Property of Addition and the Additive Identity to basic addition fact problems.