



Summer Adventure!

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Professional Development Extension

More About Math

Background for Leaders



This unit touches on many math topics important in first and second grades: counting and number sense, addition and subtraction, patterns, geometry and word problems.

Counting and Number Sense

In first and second grade, children expand their counting skills. Generally, children will be able to count to 120 by the end of first grade and 1000 by the end of second grade. Children at this age are also developing number sense: their understanding of the value of numbers, their order or position, and the words that describe numbers. A key component of number sense is an understanding of place value: the idea that the value of a digit can change depending on its place within a larger number (i.e., the ones, tens, or hundreds place). As they learn about place value, children should gain practice in grouping items into ones, twos, threes, fours, fives, tens, and hundreds.

Addition and Subtraction

Children ages of 6-8 should use addition and subtraction strategies to compose and decompose numbers up to 20. Older children should be able to do this mentally, while younger children may still need to use models or manipulatives for assistance. Children should be given additional support to practice adding or subtracting up to 100. Working with larger numbers may require children to use counters or drawings to help them keep track of larger numbers.

Patterns

Children should be comfortable counting by 1s, 2s, 3s, 4s, 5s, and 10s from 1 to 100. In general, children tend to find 1s, 2s, 5s, and 10s the easiest, while 3s and 4s are more difficult to count by and may require a visual prompt such as a hundreds chart.



Geometry

Children ages 6 to 8 should be able to use their knowledge of geometry and their problem-solving skills to compose:

- two-dimensional shapes: triangle, square, pentagon, hexagon, octagon, and rectangle
- three-dimensional shapes: pyramids, prisms, cones and sphere

Word Problems

Children in first and second grades should be able to solve a variety of word problems involving addition and subtraction (within 20 for grade 1 and within 100 for grade 2). Children should be given practice in reading word problems, working out the context of the problem, and determining what operation needs to be completed. In some cases this may require them to draw a picture of the problem or act it out.

In addition to solving given word problems, children should be encouraged to create their own word problems to deepen their understanding of addition and subtraction.



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