

# Contents

A Letter to Readers .....	vi
1. Getting Started — Counting .....	1
<i>Learning to count—including one-to-one counting and conservation of number; number songs and chants; counting by amounts greater than one; counting backwards</i>	
2. Collecting Numbers — Statistics .....	17
<i>Using children’s enjoyment of collecting things as a way to develop language and number sense at the same time; recording data using numbers and pictures</i>	
3. Measurement — Logic and Language .....	23
<i>Measuring different characteristics of objects, such as length, weight, and temperature; seeing what these measurements have in common; looking at one attribute of an object at a time in order to measure it; playing attribute games that also build language</i>	
4. Measurement — Number Sense and Geometry .....	37
<i>Connecting counting and measurement; using uniform objects, like paper clips, to assign a number to the length of an object; incorporating mathematics into cooking and other daily activities; counting, understanding place value, and learning simple fractions through measurement; linking measurement with geometry through spatial measurements such as area, perimeter, and volume; experimenting and estimating while putting away leftovers and doing other household chores</i>	

5. Playing with Shapes — Geometry .....	47
<i>Naming common shapes; taking shapes apart and reassembling them, including tangram puzzles; differentiating between two- and three-dimensional figures</i>	
6. Understanding Our Number System — Place Value .....	59
<i>Figuring out our number system's "secret code"—place value; understanding numbers through estimating, counting, and writing numbers up to 100; grouping objects into tens and ones—realizing that 58 means 5 tens and 8 ones</i>	
7. Addition — Beginning to Add (and Subtract) .....	69
<i>Learning addition and subtraction facts by taking numbers apart and putting them back together; playing games to see numbers as the sum of their parts; varying the wording of addition and subtraction questions; teaching the Great Card Trick: stumping observers and memorizing the sums to ten at the same time</i>	
8. Subtraction — A Challenge for Many Children .....	89
<i>Many different types of questions that lead to subtraction</i>	
9. Place Value — Its Role in Addition and Subtraction .....	95
<i>Adding and subtracting large numbers; "regrouping," "carrying," and "borrowing"; correcting errors in addition and subtraction caused by difficulty with place value; maintaining flexibility in thinking while learning some rules</i>	
10. Patterns — Algebra .....	109
<i>Using your child's natural interest in patterns to build mathematical thinking; relating math to art, music, architecture, and fashion; building algebraic thinking through patterns</i>	
In Conclusion .....	117

Other Resources .....	119
Acknowledgments.....	123
Supplemental Materials .....	125