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Julia Bricken

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Adults and kids of all shapes and sizes are in for a treat with this outstanding wordless book. Hoban's full-color photos have an astonishing clarity and glow to them. They include interesting and beautiful urban landscapes, portraits and still life. Children will have fun speculating about the photographsor they can simply enjoy them, no comment necessary. Looking at this book for shapes is a little like looking at a Cezanne for shapes. Nevertheless, circles, stars, triangles and even fancier geometric figures like trapezoids are here in abundance. The 11 figures represented, as well as the photographs, reach well beyond Hoban's earlier books about shapes. This book has an impressive technical quality of photographic reproduction and fine artistic content. Do your eyes a favor, and don't miss this one. 25

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NCTM

Navigating through Algebra in Prekindergarten–Grade 2 (with CD-ROM)

Greenes, Carole Cavanagh, Mary Dacey, Linda Findell, Carol and Small, Marian

ISBN #: 0-87353-499-9
Published: 4/2/2001
Content: 90 pp.
By Carole Greenes, Mary Cavanagh, Linda Dacey, Carol Findell, and Marian Small

This book demonstrates how some of the fundamental ideas of algebra can be introduced, developed, and extended. It focuses on repeating and growing patterns, introduces the concepts of variable and equality, and examines relations and functions. Its activities are designed to capture the interest of small children as they investigate growing patterns, use pictures of dogs with varying numbers of spots to solve for missing addends, and use spinners to identify and explore functions. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.

Navigating through Geometry in Prekindergarten–Grade 2 (with CD-ROM)

Findell, Carol R. Small, Marian Cavanagh, Mary Dacey, Linda Greenes, Carole E. and Sheffield, Linda Jensen
Preface by Carol R. Findell, Marian Small, Mary Cavanagh, Linda Dacey,Carole E. Greenes, and Linda Jensen Sheffield

Focusing on the important ideas of geometry, this book shows how to investigate two- and three-dimensional shapes with very young students. It introduces methods to describe location and position, explores simple transformations, and addresses visualization, spatial reasoning, and the building and drawing of constructions. Activities in each chapter pose questions that stimulate students to think more deeply about mathematical ideas. The CD-ROM features fourteen articles from NCTM publications. The supplemental CD-ROM also features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.

ISBN #: 0-87353-511-1
Published: 1/1/2001
Content: 98 pp.

MARILYN BURNS: MATH SOLUTIONS PUBLICATIONS

http://www.mathsolutions.com/index.cfm?page=wp17&crid=100

50 Problem-Solving Lessons: The Best from 10 Years of Math Solutions

Burns Marilyn

GRADES K–2
A classic professional development resource, this book remains a popular starting point for any teacher introducing a problem-solving approach to teaching mathematics. All lessons are richly illustrated with samples of children's work. 192 Pages

About Teaching Mathematics: A K–8 Resource, Third Edition

Burns, Marilyn
The ultimate how-to in teaching math, this comprehensive resource provides the guidance teachers need to make appropriate and effective instructional decisions. The five sections address Raising the Issues (from an overview of the K-8 mathematics curriculum to number sense, word problems, linking assessment with instruction, incorporating writing, and more); Instruction Activities for the Content Standards; Teaching Arithmetic; Mathematical Discussions; and Questions Teachers Ask. Includes more than 240 classroom-tested activities and dozens of blackline masters. 464 pages

A Collection of Math Lessons, Grades 1–3

Burns, Marilyn and Tank, Bonnie
This book includes lessons that help students develop an understanding of number sense, place value, addition, division, measurement, and probability. Samples of student work are included throughout. 200 Pages

First-Grade Math: A Month-to-Month Guide

by Bachman, Vicki

Getting Your Math Message Out to Parents: A K–6 Resource

by Nancy Litton
In this book, Nancy Litton explores the various channels—newsletters, back-to-school-night presentations, homework, and more—through which teachers can communicate with parents about their children's math education. 152 Pages

Good Questions for Math Teaching: Why Ask Them and What to Ask, K–6

Sullivan, Peter and Lilburn, Pat
This useful book helps teachers define "good questions," offers teachers tips on how to create their own good questions, and presents a wide variety of examples of questions that span 16 mathematical topics, including number, measurement, geometry, probability, and data. 112 Pages

Growing Mathematical Ideas in Kindergarten

Dacey, Linda Schulman and Eston, Rebeka
This book includes helpful guidelines for establishing a mathematically nurturing classroom environment, making plans for helping all children learn, choosing appropriate mathematical tasks, and assessing children's understanding. 256 Pages

Lessons for Algebraic Thinking, Grades K–2

von Rotz, Leyani and Burns, Marilyn

Manipulative materials, problem-solving investigations, games, and real-world and imaginary contexts support arithmetic learning while introducing ideas basic to algebra, including patterns, equivalence, and graphing. 280 Pages

Mathmaticas: Que le estan ensenando a mi hijo?

Burns, Marilyn
Through her compelling and lively narrative, Marilyn Burns orients viewers to the continually changing world of math instruction and the ways in which these changes will benefit students. Woven throughout the video are scenes of classroom instruction, interviews with parents about their own math schooling, and visits with professionals using math in real-world contexts. English version available.
20 Minute Videotape

Math By All Means: Geometry, Grades 1–2

Confer. Chris
This unit helps students develop their understanding of the properties of shapes. Lessons incorporate children's literature, explore quilt designs, and use manipulative materials to help children investigate how shapes are related to one another, including what happens when shapes are combined or divided. 200 Pages

Math By All Means: Money, Grades 1–2

Crawford. Jane
The lessons in this unit give students lots of experience identifying coins and their values; counting money; and applying their learning to problem-solving situations. Extensive references to children's literature along with engaging games and activities help strengthen children's number sense and computation skills. 192 Pages

Math By All Means: Probability, Grades 1–2

Tank. Bonnie
Through a variety of games and investigations using dice, cards, and spinners, students make predictions, collect data, and reflect on results. Students also develop number sense and reinforce their computation skills. Through this process, they learn what makes games fair or unfair and how to tell if they are based on strategy or chance. 200 Pages

The Math Coach Field Guide: Charting Your Course

Felux. Carolyn and Snowdy. Paula - edited by

The role of a math coach is demanding and often undefined. In this collection of essays, veteran math coaches share their expertise, providing glimpses into the unique trials, false starts, and successes they have faced in their positions. The authors ask and answer such questions as: What makes an effective math coach? What are helpful strategies for supporting both eager and reluctant teachers? and What pitfalls do math coaches encounter and what can they do about them? Written by coaches for coaches, this book is also an invaluable resource for teacher leaders, school administrators, and mathematics supervisors. 144 pages

Math Matters: Understanding the Math You Teach, Grades K–8, Second Edition

Chapin, Suzanne H. and Johnson, Art
Widely acknowledged for helping teachers, coordinators, and college faculty deepen their understanding of the mathematical concepts they teach, this essential resource offers an in-depth study of each of 14 key topics: Number Sense, Computation, Addition and Subtraction, Multiplication and Division, Fractions, Decimals, Percent, Ratios, Algebra, Geometry, Spatial Sense, Measurement, Statistics, and Probability. The content is interspersed with over 100 activities—from investigations to problem solving—giving readers an opportunity to connect ideas, compare and contrast concepts, and consider how students might come to understand the mathematics presented. 376 pages

Math and Literature, Grades 2–3

Burns, Marilyn and Sheffield, Stephanie
Combining math and literature in classroom activities is an excellent way to generate student interest and enthusiasm. Math and Literature, Grades 2–3 includes lessons based on 20 enchanting children's books. These books serve as springboards for introducing math concepts to students in a way that sparks their mathematical imaginations and helps develop their problem-solving skills. Topics include counting, sorting, addition, subtraction, money, measurement, and patterns. 160 Pages

Math and Literature, Grades K–1

Burns, Marilyn and Sheffield, Stephanie
Math and Literature, Grades K–1 includes lessons based on 22 enchanting children's books. These books serve as springboards for introducing math concepts to students in a way that sparks their mathematical imaginations and helps develop their problem-solving skills. Topics include counting, sorting, addition, subtraction, money, measurement, and patterns. Download an at-a-glance chart of children's literature featured in the Math, Literature, and Nonfiction series, listed with grade levels and topics. 152 Pages

Math and Nonfiction, Grades K–2

Petersen, Jamee

Math and Nonfiction, Grades K–2 provides 18 lessons that inspire students to explore geometric shapes in their everyday lives, investigate measurement, collect and organize data, compute with coins, learn how to tell time, and more. Download an at-a-glance chart of children's literature featured in the Math, Literature, and Nonfiction series, listed with grade levels and topics. 144 Pages

Math for All: Differentiating Instruction, Grades K–2,

Dacey, Linda and Salemi, Rebeka Eston
Math for All: Differentiating Instruction, Grades K–2 is a must-read for teachers, administrators, math coaches, special education staff, and any other educator who wishes to ensure that all children are successful learners of mathematics. This practical, research-based guide helps teachers understand how decisions to differentiate math instruction are made and how to use pre-assessment data to inform their instruction. 248 pages

Mathematics: Teaching for Understanding, 3-Video Set

This series includes lessons on place value, multiplication, and fractions. Part 1 presents teacher-directed whole-class lessons; Part 2 shows students working independently in small groups on a menu of activities; Part 3 demonstrates the way oral and written communication supports children's learning and helps teachers assess understanding.

Mathematics: What Are You Teaching My Child?,

20 Minute Videotape
Through her compelling and lively narrative, Burns orients viewers to the continually changing world of math instruction and the ways in which these changes will benefit students. Woven throughout the video are scenes of classroom instruction, interviews with parents about their own math schooling, and visits with professionals using math in real-world contexts. Spanish version available.

Minilessons for Math Practice, Grades K–2,

Bresser, Rusty and Holtzman, Caren
This new book for kindergarten through grade 2 classrooms presents an innovative approach to reinforcing young students' math skills. Designed for use during transition times, these minilessons are easy to implement, require little or no preparation, take only 5 to 15 minutes to teach, and can be used with any math program. The 27 engaging activities help students practice math concepts, skills, and processes by applying them in a variety of problem-solving contexts throughout the school day. Content areas explored include number and operations; algebra; geometry; data analysis and probability; and measurement. Each activity includes an explanation of the mathematics involved, a list of key questions to ask, a brief vignette, and ideas for extending the activity throughout the school year. 176 pages

Second-Grade Math: A Month-to-Month Guide

Litton, Nancy
Topics of study include addition and subtraction, basic facts, place value, data collection, geometry, measurement, and more. 248 Pages

Show and Tell: Representing and Communicating Mathematical Ideas in K–2 Classrooms

Dacey, Linda and Eston, Rebeka
Numerous classroom vignettes and reflective comments provide a model for how "show and tell" can enhance teaching and improve children's learning. The many examples of student work will inspire teachers to adopt such an approach. 240 Pages

Sizing Up Measurement: Activities for Grades K–2 Classrooms

Bachman, Vicki
The lessons in Sizing Up Measurement: Activities for Grades K–2 Classrooms focus on length, time, area, capacity, weight, and temperature. Each lesson is organized in an accessible, easy-to-use format that includes an overview, a list of materials, a vocabulary list, and step-by-step teaching directions. Students come away from these lessons with a deeper understanding of why

and how to measure, and they develop the confidence required to make sense of any situation and the measurement tools involved. 192 pages

So You Have to Teach Math? Sound Advice for K–6 Teachers ,

Burns, Marilyn and Silbey, Robyn
So You Have to Teach Math? poses more than 100 questions that
new and experienced K–6 teachers often ask themselves—and provides in-depth answers to these questions, no matter how large or how small. Marilyn Burns and Robyn Silbey's responses are guaranteed to give teachers the support and direction they need to teach mathematics well. 136 Pages

Supporting English Language Learners in Math Class, Grades K-2

Bresser, Rusty Melanese, Kathy and Sphar, Christine
Supporting English Language Learners in Math Class, Grades K–2 outlines the challenges these students face when learning math and provides a wealth of specific strategies teachers can use to help them succeed. The lessons in this book guide teachers of primary grades in developing students' proficiency in English while also developing their mathematical understanding. In addition, teachers learn how to modify existing math lessons to support students with varying degrees of English language proficiency. 216 Pages

Teaching Arithmetic: Lessons for Addition and Subtraction, Grades 2–3,

Tank, Bonnie and Zolli, Lynne
Students engage in explorations with money, measurement activities, investigations, and games that motivate their thinking and build their estimation and computation skills. 200 Pages

Teaching Arithmetic: Lessons for First Grade

Sheffield, Stephanie
Through manipulative materials and real-world problems, children learn to estimate, understand numerical relationships, develop number sense, compute mentally and with paper and pencil, and use arithmetic as a tool to solve problems. 176 Pages

Teaching Arithmetic: Lessons for Introducing Place Value, Grade 2

Wickett, Maryann and Burns, Marilyn
Lessons engage children in comparing and explaining the relative size of numbers, counting larger numbers in two or more ways, and recognizing that the number of objects always remains the same despite different ways of grouping. 200 Pages

Teaching Number Sense, Grade 1

Confer, Chris
In these lessons, children build their understanding of counting, number relationships, and landmark numbers. They also develop computation strategies, further their understanding of composing and decomposing numbers, and develop a beginning sense of place value. 160 Pages

Teaching Number Sense, Grade 2

Scharton, Susan
In these lessons, children compose and decompose larger numbers, develop their computation strategies, strengthen their sense of place value, and sharpen their estimation skills. 200 Pages

Teaching Number Sense, Kindergarten

Confer, Chris
In these lessons, children investigate number relationships, practice problem solving using landmark numbers, and explore ways to count, compose, and decompose numbers. 152 Pages

Learn More This Is Only a Test: Teaching for Mathematical Understanding in an Age of Standardized Testing

Litton, Nancy and Wickett, Maryann
Transform your teachers' and students' approaches to standardized tests from one of panic and anxiety to one of control and confidence! The nine chapters in this book provide the support teachers need to align their math lessons with required state standards. They create a year-long plan for teaching math while simultaneously ensuring state standards are met; learn about and implement best teaching practices; examine the relationship between released test items and the knowledge and skills students need to respond correctly; and discover ways to handle test preparation during the weeks before a test. 128 Pages

Writing in Math Class: A Resource for Grades 2–8

Burns, Marilyn
Numerous examples illustrate how students sort, clarify, and define their thinking through different types of writing—journal writing, solving math problems, explaining mathematical ideas, and creative writing about math. This invaluable and inspiring resource also includes assessment strategies, practical teaching tips and suggestions, answers to frequently asked questions, and samples of student work. 208 Pages

Picture Books

12 Ways to Get to 11

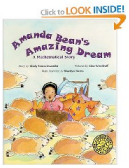
Merriam, Eve
Aladdin (August 1, 1996)

From the late poet, a whimsical exploration of enumeration. On each colorful spread, like and dissimilar--but somehow related--objects total 11.

Number and Operation
- ***PK-1***

Amanda Bean's Amazing Dream

Neuschwander, Cindy
A Brainy Day® book, is used in Teaching Arithmetic: Lessons for Introducing Multiplication. The advantages of multiplication are introduced in a simple story about an African-American girl who loves to count things, both in and out of school, but is unsure how multiplication will speed up the process. After counting the tiles on the kitchen counter and the books on the library shelves, she falls asleep and begins to dream of a calm bike ride in the country. Then, eight sheep on bicycles come zooming by and stop at a barn to get five yarn balls apiece to give to seven grandmothers knitting sweaters. Amanda is overwhelmed by trying to tot up bicycle wheels, sheep legs, knitting needles, and sweater arms-until the sheep and the grandmothers begin shouting, "Multiply!" She awakes, convinced that she wants to learn how. Large, lively, ink-and-watercolor cartoons in cheerful colors are filled with objects to count, from lollipops to windowpanes. A comprehenive guide for adults on the usage of the principles and pictures in the book is included.



Number and Operation
- ***K-3***

Anno's Counting Book

Mitsumasa, Anno

Anno's Flea Market
Anno, Mitsumasa

Anno's Math Games II

Anno, Mitsumasa
Lively illustrations and intriguing puzzles and games make basic mathematical concepts accessible and fun for very young children in these inventive books from award-winning illustrator Mitsumasa Anno. * comparing quantity, size, position, elements * graphing with coordinates * liquid measurement

Before and After: A Book of Nature Timescapes

Thornhil, Jan

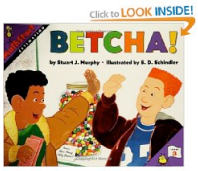
Benny's Pennies

Brisson, Pat
Benny McBride uses his five precious pennies to buy special gifts for his family and pets, in a repetitive, cumulative tale--enhanced with vivid paper-sculpture artwork--that explores the concepts of counting and money.

Number and Operation
- ***Pk -1***

Betcha! : Estimating

Murphy, Stuart



Playing with numbers--that's what this book from Murphy (The Best Vacation Ever, 1997, etc.) is all about. Part of the MathStart series, this entry introduces the art of estimation. Two boys are engaged in the project, one estimating, the other counting. Their ultimate goal is to try to figure out how many jelly beans are in a big glass jar and win tickets to a sporting event, but the storyline bows deeply to the emphasis on estimation as a process. As the boys head downtown to the toy store and the jelly beans, they estimate the number of people on the bus, the numbers of cars in a traffic jam, the total prices of goods in a window, all the while demonstrating both rounding off and how to count a small number and apply that to the great, uncounted whole through the use of multiplication, fractions, and simple geometry. Murphy's success is in beveling the sharp, unforgiving reputation of math and in showing how numbers can be toyed with. Readers may come away with the sense that they are not slaves to numbers--it's the other way around.

Estimation

- ***PK-3***

Beware of Boys

Blundell
As a boy attempts to outwit a hungry wolf, he sets the wolf off on a series of wild goose chases, each involving ingredients for a new recipe for boy. The book is very funny but it's the measurement both dry and wet and both real and imaginary.

Big and Little

Jenkins, Steve

Biggest, Strongest, Fastest

Jenkins, Steve
Large, clear print; fascinating facts; and beautiful, detailed, cut-paper collages make this excellent title a delight. One main fact is presented per spread about each of 14 animals, e.g., "The Etruscan shrew, the world's smallest mammal, could sleep in a teaspoon." Two more relevant facts are given in smaller print. Silhouette drawings show comparative sizes?the blue whale is shown next to an adult human. The realistic, inventive, textured illustrations, mostly double spreads, flow smoothly from page to page. A helpful chart at the end contains further information about each creature, such as diet and habitat. An all-round superlative effort.

Geometry/Spatial
Displaying and Analyzing Data

- ***K-3***

The Button Box

Reid, Margarette S.

Can You Count to a Googol?

Wells, Robert E.

Cats Add Up!

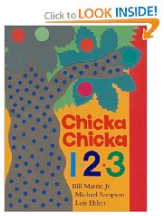
Ochiltree, Dianne

Centipede's 100 Shoes

Ross, Tony

Chicka Chicka 1 2 3

Martin, Bill Jr.
A counting-book companion to Martin and Ehlert's Chicka, Chicka, Boom, Boom (S & S, 1989). The cut-paper art is almost identical to the earlier work, right down to the use of vibrant splashes of color. The layout will also be familiar to that title's many fans. At the center of the story this time, however, is an apple tree. Numerals race to the top with 1, 2, and 3 leading the way. Next come 4, 5, and 6 climbing right behind, but "Chicka Chicka 1, 2, 3… Will there be a place for me?" asks 0. Page after page, the numbers climb ("Hot pink 12, lucky 13, picking apples, red and green") and they all forget 0 down in the lower right-hand corner. They keep going "until at last there's 99, and all the numbers are feeling fine." Except for 0, that is, who begins to cry once again, "Chicka Chicka 1, 2, 3… Will there be a place for me?" And, at precisely that moment, a swarm of bumblebees arrives shouting, "GET OUT OF OUR TREE…." Alas, the counting begins anew, this time backward. And 0, no bad apple, finally discovers his life's calling and rightful place: at the very top of the tree next to 10, who stayed there all along, becoming… 100. This story is a perfect selection for 100th day or Zero the Hero celebrations. A deliciously sweet selection, and a nifty counting book to boot.



Number and Operation

- ***PK-3***
-

Chimp Math: Learning About Time from a BabyChimpanzee

Nagada & Bickel

City by Numbers

Johnson, Stephen

A Cloak for the Dreamer

Friedman, Aileen
A Cloak for the Dreamer, a Brainy Day® book, is a tale about a tailor's cloak. It is used in Math and Literature, Grades 2–3 and Math By All Means: Geometry, Grades 1–2.

The Coin Counting Book

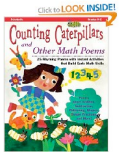
Williams, Rozanne L.

Color Zoo

Ehlert, Lois

Counting Caterpillars and Other Math Poems

Franco
Add rhyme to math time! Young learners will love these delightful poems and companion activities that teach essential skills and concepts: counting, addition, subtraction, shapes, patterns, measurement, time, money and more.



Pattern/Algebra

- ***PK-3***

Cubes, Cones, Cylinders, and Spheres

Hoban, Tana
The photos stand alone in this textless mathematics book. Four small, labeled diagrams on the back of the title page define the shapes. After that, readers are led on a treasure hunt for those shapes through 21 crisp, colorful pictures. A display of teddy bears in clown hats, a basket of baseballs, a breathtaking castle, and sculptured hedges typify the broad-ranging subject matter. Math teachers approaching solid geometry will find this to be a useful resource. Children will simply enjoy identifying the plethora of shapes to be found out in the world if one only takes the time to look.

Geometry/Spatial

- ***K-3***

The Doorbell Rang

Hutchins, Pat
Victoria and Sam are delighted when Ma bakes a tray of a dozen cookies, even though Ma insists that her cookies aren't as good as Grandma's. They *count* them and find that each can have six. But the doorbell rings, friends arrive and the cookies must be *re-divided*. This happens again and again, and the number of cookies on each plate decreases as the visitors' pile of gear in the corner of the kitchen grows larger. When each child's share is down to one, and the doorbell rings again, Sam and Victoria are worried and then elated, when they discover that it's Grandma with a tray of dozens more cookies. Hutchins' illustrations are more than cheerful. Her exuberant colors flow from page edge to page edge with a lavish generosity born out by Grandma's abundant supply of cookies. The double-page spreads are filled with details for children to find, such as the peripatetic cat, Ma's unending battle with the footprints on her clean kitchen floor and the changing facial expressions of the multiracial children. The math concepts shown make this a beautiful choice for curriculum support in the primary grades, and the evident dismay of the children may lead to further discussion in areas other than math. As refreshing, enjoyable and unpredictable as an unexpected visit from a friend.

Pattern/Algebra

- ***PK-3***

Ducks Disappearing

Naylor/Maddox
This is a counting book with a plus. We quickly begin counting ducklings and subtracting as the line gets smaller but that's only part of the story. Soon we are presented with a problem to be solved.

Number and Operation

- ***PK-1***

Each Orange Had 8 Slices

Gigantic, Paul
The vibrant style of Crews's gouache artwork is well matched to this exceptional introduction to mathematics. A situation is presented in simple sentences. ``On my way to Grandma's I saw 2 fat

cows. Each cow had 2 calves. Each calf had 4 skinny legs," and the questions follow:``How many fat cows. . . calves . . . legs were there in all?" The bright, cheerful illustrations boldly amplify the scenes, making interaction easy and fun

Number and Operation

- ***K-3***

Exactly the opposite

Hoban, Tana
Using a variety of people, animals, and objects found in outdoor settings of both the city and the country, she introduces and expands on the concept of opposites in this wordless photographic book. The photographs are clear, bright, and enticing. Pairs of opposites are presented on facing pages; some are repeated and thus reinforced. For instance, in one set of two girls playing with a wagon, there are the opposites of *push/pull, in/out, left/right, and back/front*. As with all of Hoban's books, readers are asked to view their environment in a new light while learning a new concept. A worthy addition to any collection.

Farmers' Market

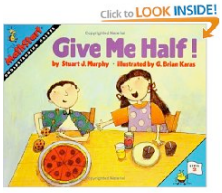
Johnson
PreSchool-Grade 2. A farm family makes their weekly trip to sell produce at a nearby city market. Laura helps at the vegetable stand before meeting a friend. The striking acrylic paintings are the strongest part of the book. Johnson starts off with the cool colors of the early dawn as Laura and her family load the truck for their trip to the city. The hues brighten to the full-light noon of a summer celebration, with colorful umbrellas and food for sale. The center of the book opens out to a wordless four page spread showing Laura taking in the sights of the market from artists and craftspeople to other farmers.

G of for Google: A Math Alphabet Book

Schwartz
Math concepts from simple to very complex are explained and illustrated for each letter of the alphabet.

Give Me Half!

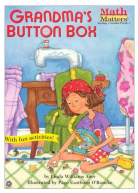
Murphy, Stuart J.
The concept that "_ and _ is 1" is presented using two bickering siblings who cannot share anything without parental intervention. Finally, the situation degenerates into a food fight, and the kids decide that if they each clean up half, they'll be done a lot sooner. Although the presentation of the math concept is clear and straightforward and the acrylic, gouache, and pencil illustrations are colorful and quirky, the singsong rhyme and lack of any real plot make this a less interesting choice than Pat Hutchins's The Doorbell Rang (Greenwillow, 1986). A list of suggestions for adults using the book with children follows the story.



Number and Operation

- ***K-3***

Grandma's Button Box



.Aber, Linda Williams
Kane Press

When Kelly drops Grandma's button box and the buttons scatter all over the room, she and her cousins scramble to find them and sort them out. First arranging them by shape, then by size, and finally by color, they can't decide how Grandma had arranged them. By the time their grandmother admits, "They were always just jumbled together," the cousins (and readers) have learned a bit about sorting and sets. The lesson is not intrusive, as the book introduces young students to concepts that they will meet again in math. The jaunty line-and-wash illustrations give a cheerful look to this simple story from the Math Matters series.

Greedy Triangle, The

Burns, Marilyn
Scholastic Paperbacks (February 1, 2008)

An offbeat introduction to geometry. When a triangle tires of having only three sides, he asks the shapeshifter to change him first into a quadrilateral, then a pentagon, a hexagon, and so forth until he realizes he is happiest as a triangle: he can hold up a roof, be a slice of a pie and, best of all, slip into place when people put their hands on their hips. "That way I always hear the latest news...which I can tell my friends." The text is clever and shows more than the usual places to find shapes?part of a computer screen, a section of a soccer ball, a floor tile. The acrylic and colored-pencil illustrations are colorful, abstract, and filled with smiling shapes done in shades of turquoise, pink, and yellow. A two-page spread of suggestions for adults to reinforce the math lessons featured is included at the end of the book,

Geometry

- ***K-3***

Hottest, Coldest, Highest, Deepest

Jenkins, Steve

How Big Is a Foot?

Myller, Rolf

How Tall, How Short, How Faraway

Adler, David

Inch by Inch

Lionni, Leo

Is it Larger? Is it Smaller?

Hoban, Tana
Relative size is the concept unifying Hoban's latest collection of eye-filling photos. As always, her choice of subjects represents a wonderful conjuction of eye and mind. See, for example, the rabbit's large ears against a little boy's smaller ones; the two large X's of a sawhorse picnic table with the four small X's of its benches stacked upside-down on the table; or the different measures of cake ingredients lined up in front of a partially-filled mixing bowl, being stirred. Often the motif is stated and echoed, as in the toy car beside a real Volkswagen being washed by father and

son. Other combinations are more and less obvious; but the simplest, most predictable groupings make striking pictures, and the subtlest (e.g., a row of icicles against a grubby background) bear longer gazing in their own right.

Measurement

- ***PK***

It Looked Like Spilt Milk

Shaw, Charles

his is a classic concept book, and one of my favorites. As a read-aloud, I like it better than Eric Carle's more recent Little Cloud. The repetition not only engages the children, it makes it easy for them to respond successfully. "It looked like ..." gives them a chance to identify the shape, with no wrong answers, because the next phrase is "But it wasn't a wasn't a ..." for all. By the time the last page revals that "It was just a cloud in the sky" most of them have guessed,and are pretty proud of themselves. It might be too long for many groups (he wrote it for a pre-television audience) but it is easy to skip pages or speed up. Makes a great feltboard using quilt batting.

Geometry/Spatial

- ***PK-3***

King's Commissioners, The

Friedman, Aileen

This Brainy Day® book about a king and his men is used in Math and Literature, and Teaching Arithmetic: A confused king has appointed a commissioner to handle every problem in the kingdom from flat tires to chicken pox. Now he has no idea how many commissioners there are, and he orders his royal advisors to gather and count them as they walk through the door. The first advisor counts by twos, the second by fives, and the little princess by tens. Of course, they all arrive at the same answer. The king is utterly perplexed, but his daughter clears up the mystery and readers learn the value of multiplication. Lessons for Introducing Place Value,

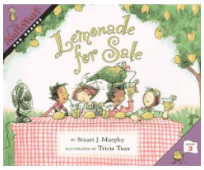
Number and Operation

- ***K-3***

Lemonade for Sale

Murphy, Stuart J.

The Elm Street Kids Club decide to sell lemonade to make money to fix their clubhouse. For three days, they keep a *bar graph* to track their sales. It shows a steady increase and then a noticeable drop. After finding out that the competition is a new kid juggling down the street, they ask him to perform beside the stand and sales increase "over the top." The humorous and colorful illustrations will appeal to young children, but they may not be ready for the concept of bar graphs. Older children interested in learning about them are likely to find the book too young in appearance and story line.



Display and Analyze Data

- ***K-3***

Let's Go Visiting

Collier & Collier

Children will love counting their favorite baby animals--like foals and puppies and ducklings--in this spirited lap-sized board book edition of Sue Williams and Julie Vivas's barnyard adventure.

Number and Operation

Little House in the Big Woods

Wilder

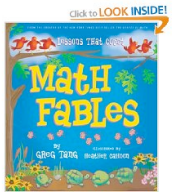
Marvelous Math: A Book of Poems

Hopkins
Hopkins pulls together poems on mathematics, providing insights from writers such as Karla Kuskin, Janet S. Wong, and Lillian M. Fisher. Several selections share the predictable theme of the significance of math and numbers. Rebecca Kai Dotlich's title poem, for example, asks questions such as, "How fast does a New York taxi go?" and "How slow do feathers fall?" and suggests how to find the answers: "Mathematics knows it all!" Some take a unique point of view, as in Betsy Franco's "Math Makes Me Feel Safe."

Algebra Grades 3-5

Math Fables

Tan, Greg
Scholastic Press; 1st edition (March 1, 2004)



Complete with catchy titles such as "Trying Times," "Midnight Snack," and "Gone with the Wind," each brief fable told in rhyme ends with a moral. Except for some suggested activities at the end, there are no math problems or puzzles to solve. Rather, the author strives to help readers learn how to see a number as a combination of smaller groups of numbers in order to lay "the foundation for place value" and as a "first step to building strong computational skills." The text and perky, computer-generated cartoons show youngsters that there are many different ways of putting numbers together. For example, in "Going Nuts," four squirrels frolic in autumn leaves until they realize they need provisions for winter. One begins to explore while three sit on a branch, frightened with worry. Next, "2 squirrels raced to gather nuts" while "the other 2… buried them in stashes underground." Finally, "all 4 slept very well that night,/no longer feeling scared./They learned it's wise to plan ahead/and always be prepared!" Cahoon keeps the different combinations together by enclosing them in ovals, visually emphasizing that although the groupings may look different, they still add up to four. Featuring words like "sultry," "wholeheartedly," and "procrastinate," the enriching vocabulary is an added bonus. A fine addition to math shelves.

Patterns/Algebra

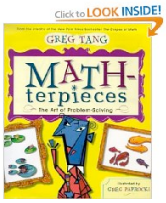
- ***K-3***

Math Games & Activities from Around the World

Zaslavsky
This is an excellent book that lets children view math from the fun and creative perspective. Teachers can have fun while teaching district standards and make sure that our youth isn't bored with the "textbook" syndrome as Harry Wong puts it. We need to show children that mathematics deals with every day life and that it doesn't only appear on the pages of a text every five days. Mathematics is the necessary means for survival in our complex and equative society. This books let's us step outside of the "textbook syndrome" and let children explore the "real-world" experiences.

Math-terpieces

Tang, Greg
Scholastic Press; 1st edition (July 1, 2003)



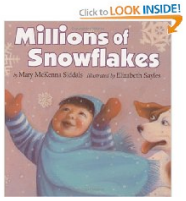
Tang and Paprocki, who also wrote and illustrated The Best of Times (2002) and Math Appeal (2003), again challenge children to take a playful approach to learning math, using elements from famous paintings by artists such as Matisse, Mondrian, and Warhol. For instance, one double-page spread has a reproduction of Dali's painting The Persistence of Memory and the verse, "Is it a dream or is it real? / It's hard to know when art's surreal. / Dali's clocks once so precise-- / now they're melting just like ice. / Find SEVEN ways to make an 8 / group the CLOCKS, it's getting late!" Paprocki's more colorful versions of melting clocks are grouped on the facing page, and the groups can be combined in seven different ways that add up to eight clocks. Children drawn to the gamelike element will undoubtedly become more familiar with the paintings, though the main point is combining the sets of objects. This book provides an attractive setting for that activity.

Displaying/Analyzing Data, Problem Solving

- ***K-3***

Millions of Snowflakes

Siddals, Mary Mckenna



A short rhyming text captures a little girl's delight as she romps with her dog in a wintry landscape. The heavily bundled youngster counts, touches, and tastes the snowflakes as they fall around her. Linda Brennan's Flannel Kisses and Lezlie Evans's Snow Dance (1997, both Houghton) both welcome winter in rhyme; their longer texts and larger formats lend themselves better to group sharing than Millions of Snowflakes. However, Siddals's book is perfect for small hands, and Sayles's evocative illustrations in pastels create winter surroundings made for playful exploration.

Geometry/Spatial

- ***PK***

More Than One

Schlein, Miriam

Mouse Shapes

Walsh, Ellen Stokes

When three little mice run from a cat, they find a cluster of brightly colored squares, triangles, rectangles, circles, ovals, and diamonds where they hide until he leaves. Soon they are moving the shapes about to create pictures: a house, a wagon, and even a cat. After the real cat pounces, they hatch a clever plan to scare him away. Just as visually appealing as Mouse Paint (1989) and Mouse Count (1991), this little book features simple, elegant page design using cut-and-torn-paper collage figures silhouetted against a clean, white background and framed by a strong black rectangle. Walsh accomplishes her purpose of teaching shapes subtly and playfully through the text and illustrations. Though the statement "any shape with three sides is a triangle" wouldn't pass muster in a geometry class, it may not raise much concern in the preschool or kindergarten classroom. Parents and teachers can easily extend the lesson and the fun by providing cutout colored-paper shapes for children to play with after the story ends.

Geometry and Spatial

- ***PK-1***

My Map Book

Fanelli, Sara

The Mudflat Olympics

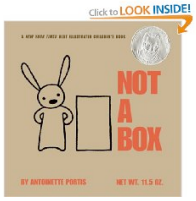
Stevenson
The animals have no compunction about stretching the truth and the reader needs to exercise logic in order to see what's going on. An added mathematical dividend is the various measurement called for in the stories. More Information and Activities.

The Napping House

Wood, Audrey

Not a Box

Portis, Antoinette
In bold, unornamented line drawings of a rabbit and a box, the author-illustrator offers a paean to the time-honored imaginative play of young children who can turn a cardboard box into whatever their creativity can conjure. Through a series of paired questions and answers, the rabbit is queried about why he is sitting in, standing on, spraying, or wearing a box. Each time, he insists, "It's not a box!" and the opposite page reveals the many things a small child's pretending can make of one: a race car, a mountain, a burning building, a robot. One important caveat: the younger end of the intended audience is both literal and concrete in their approach to this material. The box itself, drawn as a one-dimensional rectangle, will be perceived by preschoolers to be flat and not readily understood as three-dimensional. Furthermore, those children are likely to interpret the "box's" transformation to be "magic," while five- and six-year-olds are able to make the cognitive conversion from flat rectangle to three-dimensional box and to understand that the transformation has been made by the rabbit's own imagination. Both audiences will enjoy the participatory aspect of identifying each of the rabbit's new inventions. Knowledgeable adults will bring along a large box to aid in understanding and to encourage even more ideas and play.



Geometry/Spatial

- ***PK-1***

One Duck Stuck

Root, Phyllis

One Gorilla

Morozumi, Atsuko

One Grain of Rice

Demi
Scholastic Press (April 1, 1997)

Grade 1-4. A resourceful village girl outsmarts a greedy raja, turning a reward of one grain of rice into a feast for a hungry nation. Delicate paintings emblazoned with touches of gold give this Indian folktale an exotic air.

One Hundred Hungry Ants

Pinczes, Elinor J.
What a wonderful tool for teaching multiplication, division, and grouping strategies! The ants march in 1 group of 100, 2 groups of 50, 4 groups of 25, etc. This book is useful and enjoyable

for all elementary classrooms. Students love modeling the ants' groups, drawing new patterns, and even writing a new (happier) ending for the story. * This book was sent home with 100 unifex cubes to use along with the book. We used the cubes as the ants. We started off with one line of 100 cubes (as the ants). Then, in the story, they split into 2 lines of 50, so we split our cubes, too. Then, 4 lines of 25, and so on.... Excellent book to use with the cubes to demonstract how many different ways to make 100.

Pattern/Algebra

- ***PK-2***

One Monday Morning

Shulevitz, Uri

Only One

Harshman, Marc

Over, Under and Through

Hoban, Tana

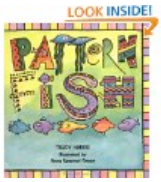
Leap-frogging over a fire hydrant, ducking under "London Bridge," crawling through pipe tunnel -- Tana Hoban's brilliant photographs of children transform these activities into a fascinating exploration of spatial concepts. There are twelve concepts in all -- and some surprising discoveries for the young child. As in Look Again! and Count and See, Tana Hoban has created an imaginative and provocative adventure into the many ways of seeing.

Geometry/Spatial

- ***PK-3***

Pattern Fish

Harris, Trudy



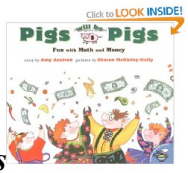
Although there's not much of a story line in this appealing concept book, there is definitely more here than initially meets the eye. The rhyming prose and brightly colored cartoon fish inhabit a world of patterns, beginning with the simplest AB pattern and growing increasingly complex. Upon closer inspection, the patterns can be seen echoing throughout, as pictures both express and reinforce the pattern of the words. For example, the ABB pattern introduced by an eel is echoed not only on the creature's body (stripe-dot-dot), but also in the bubbles that issue from its mouth (large-small-small), the underwater reeds (short-tall-tall) and plants (curve-star-star), and borders of the page (yellow-red-red). Once children get the idea, they will enjoy discovering the repetition and looking for examples. A clear and effective teaching tool.

Pattern/Algebra

- ***PK-1***

A Pig Is Big

Florian, Douglas



Pigs Will be Pigs

Axelrod, Amy
In this bright and bouncy concept book, the Pigs turn their house upside down looking for spare change so that they can go out to dinner. Readers are invited to count along as the porkers dig out cash from the socks drawer, pennies from under the bed, quarters from the closet, and a five-dollar bill from the washing machine. Answers are hidden in the illustrations. The Pigs' reward is a trip to the Enchanted Enchilada. The whole menu is reproduced, complete with prices, so readers can figure out what the family can afford to eat and how much money they will have left over. A final page recaps all the amounts and shows the multiplication and addition necessary to find the answers. The vibrant illustrations are done in yellow, turquoise, pink, orange, and green. Those hues, along with the cacti in the yard and the Mexican restaurant, give the book a Southwestern flair. The Pigs are wildly dressed, from the daughter's fishnet stockings to the father's floppy black-and-white bow tie. After they have heard the story once, children will enjoy going back and studying the pictures. An entertaining tool for reinforcing math skills that should be especially useful in a whole-language curriculum.

Number and operation

- ***1-3***

Q Is For Duck

Elting/Kent
Any alphabet book is a pattern book with the alphabet as pattern. Q Is for Duck is no exception. What makes it different and therefore more useful in the math program is that there's a kind of "outside the box" thinking necessary to predict the action.

Quack and Count

Baker, Keith

Roman Numerals I to MM: Numerabilia Romana Uno ad Duo Mila

Geisert, Arthur

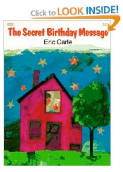
Rooster's Off to See the World

Carle, Eric

The Shape of Things

Dodds, Dayle Ann

The Secret Birthday Message



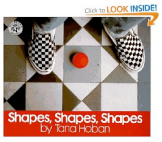
Carle, Eric
A small boy follows a coded message to find his birthday surprise. PW noted that this book introduces "pattern recognition, matching shapes, map-reading, and directional relationships in full-color pages that allow preschoolers to participate fully in the enticing adventure."

Pattern/Algebra

- ***PK-3***

Shapes, Shapes, Shapes

Hoban

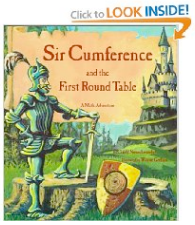


Adults and kids of all shapes and sizes are in for a treat with this outstanding wordless book. Hoban's full-color photos have an astonishing clarity and glow to them. They include interesting and beautiful urban landscapes, portraits and still life. Children will have fun speculating about the photographsor they can simply enjoy them, no comment necessary. Looking at this book for shapes is a little like looking at a Cezanne for shapes. Nevertheless, circles, stars, triangles and even fancier geometric figures like trapezoids are here in abundance. The 11 figures represented, as well as the photographs, reach well beyond Hoban's earlier books about shapes. This book has an impressive technical quality of photographic reproduction and fine artistic content. Do your eyes a favor, and don't miss this one.

Geometry and Spatial

- ***PK***

Sir Cumference and the First Round Table : A Math Adventure



Neuschwander

When Sir Cumference drinks a potion which turns him into a dragon, his son Radius searches for the magic number known as pi which will restore him to his former shape.

Geometry and Spatial

- ***K-3***

Six-Dinner Sid

Moore, Inga

Spaghetti and Meatballs for All! A Mathematical Story

Burns, Marilyn

This Brainy Day® book about a spaghetti dinner is used in Math and Literature, Grades 6–8 and

A Star in My Orange: Looking for Nature's Shapes

Rau, Dana Meachen

So Many Circles, So Many Squares

Hoban, Tana

Students will begin to notice squares and circles everywhere after looking at these appealing photographs. Circles in squares, squares in circles, squares in squares, etc., can all be seen in many diverse objects, from dishwashers to colorful teapots, to brightly patterned fabrics. The photography is excellent and the subjects are varied. Making a

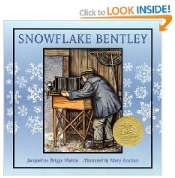
book to illustrate common objects in the classroom and depicting the circles and squares would be a first rate follow up activity to reinforce these concepts. This is one of Hoban's best books on shapes yet.?

Geometry/Spatial

- ***PK-1***
-

Snowflake Bentley

Martin, Jacqueline Briggs
Azarian's (A Farmer's Alphabet) handsome woodcuts provide a homespun backdrop to Martin's (Grandmother Bryant's Pocket) brief biography of a farmboy born in 1865 on the Vermont snowbelt who never lost his fascination with snowflakes. Wilson A. Bentley spent 50 years pioneering the scientific study of ice crystals, and developed a technique of microphotography that allowed him to capture the hexagonal shapes and prove that no two snowflakes are alike. Martin conveys Bentley's passion in lyrical language ("snow was as beautiful as butterflies, or apple blossoms"), and punctuates her text with frequent sidebars packed with intriguing tidbits of information (though readers may be confused by the two that explain Bentley's solution of how to photograph the snowflakes). Hand-tinted with watercolors and firmly anchored in the rural 19th century, Azarian's woodcuts evoke an era of sleighs and woodstoves, front porches and barn doors, and their bold black lines provide visual contrast to the delicate snowflakes that float airily in the sidebars. A trio of Bentley's ground-breaking black-and-white photographs of snowflakes, along with a picture and quote from him about his love for his work, is the icing that tops off this attractive volume.



Pattern/Algebra

- ***K-3***

The Table Where Rich People Sit

Baylor/Parnall
With humor and imagination, a family explains its value system. Because they relate everything to big money while actually not valuing or working toward wealth, this makes an excellent book through which to play with large numbers and your own value system

Telling Time: How to Tell Time on Digital and Analog Clocks!

Older, Jules

Ten Black Dots

Crews, Donald
What can you do with ten black dots? Just about anything! In this exciting, unique counting book, one dot can make a sun, two dots can make they eyes of a fox, and three dots can make a snowman's face. And that's just the beginning!

Ten Flashing Fireflies

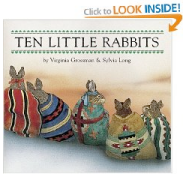
Sturges, Philemon

Ten Friends

Goldstone, Bruce

Ten Little Rabbits

Grossman, Virginia



This winner of the Parents Magazine "Best Book of the Year" award is a simple counting book that celebrates Native American culture--and rabbits, of course. Each of Sylvia Long's detailed, painterly double-page illustrations has an old-fashioned quality that gives the book the feel of classic children's literature from the turn of the century. The accompanying text is a simple, rhythmic series of rhyming couplets. "Three busy messengers sending out the news" has three rabbits using one of their blankets to send smoke signals across a grassy river valley; "Four clever trackers looking for some clues" shows intrepid little hunters with bows and arrows examining the enormous paw-print of a bear. After "Ten sleepy weavers knowing day is done," an extra panel shows one rabbit hunched over a campfire while the other nine sleep soundly. A cut above the mass of counting books.

Number and Operation

- ***PK***

Ten Sly Piranhas: A Counting Story in Reverse

Wise, William

A Three Hat Day

Geringer, Laura

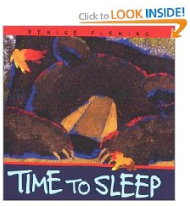
Tiger Math : Learning to Graph from a Baby Tiger

Nagda

This innovative book uses graphs to tell the story of T.J., a Siberian tiger cub born at the Denver Zoo. T.J. is orphaned when he is just a few weeks old. At first he refuses to eat his new food, and the zoo staff worries. If the baby tiger doesn't start to eat soon, he will starve. But the staff refuses to give up, and finally their love and persistence pay off: T.J. grows into a huge, beautiful, and very healthy tiger.

Time to Sleep

Fleming, Denise



Frost on the grass. Falling leaves. Days growing shorter. A sky full of geese. Even a skin "so tight I could not eat another bite" is a sign that winter is on its way. Clearly it's not just your everyday bedtime but the long winter's sleep we're dealing with here, as Bear smells winter in the air and gets ready to hibernate. First, though, she must tell Snail, who must tell Skunk, who must tell Turtle, and so on until Ladybug brings it full circle, waking Bear to tell her...It's Time to Sleep. Fleming uses colored cotton rag fiber to create her jewel-toned illustrations, erupting here in fiery autumn colors. Their angular composition heightens the sense of activity generated by the animals' preparations until Bear's solid, slumbering form brings it all to a cozy, comfortable close.

Measurement

- ***PK***

Tomorrow's Alphabet

Shannon/Crews

Explores the alphabet pattern and the pattern of a particular kind of prediction. "B is for eggs, tomorrow's birds" so "C is for milk, tomorrow's ?" cannot be "cow", as many people guess first, because milk doesn't turn into a cow. Absorbing a pattern and predicting the next in a sequence is done playfully and very well in this picture book.

Too Many Pumpkins

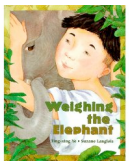
White/Lloyd
The reader makes predictions and multiplies numbers almost immediately, although it never mentions the process. When a pumpkin rolls into the yard of a pumpkin-hating woman, she buries it. Now, how many seeds are there in the average pumpkin? How many pumpkins on each vine?

Two of Everything

Hong, Lily Toy

Weighing the Elephant

Ye/Langlois
The villagers must use estimation and problem solving skills to accomplish the seemingly impossible task of figuring out an elephant's exact weight without access to a large scale.



Estimation
Problem Solving

- ***K-3***

What Is Square?

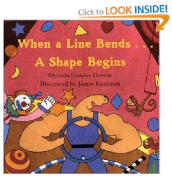
Dotlich, Rebecca Kai

What's a Pair? What's a Dozen?

Swinburne Stephen

When a Line Bends . . . a Shape Begins

Greene, Rhonda Gowler
en shapes are presented in picture and verse. Along with the familiar circle, square, triangle, diamond, rectangle, octagon, and oval are the less frequent star, heart, and crescent. Each shape has its own verse and double-page spread packed with visual examples. There are even some extras for observant children to discover. The watercolor-and-ink illustrations are bold and clean, with ample color; however, a texturing technique occasionally results in a slightly murky appearance. At no time does this texturing obscure the text or interfere



with line or shape. Those tired of bright primary colors in children's books may find the muting a nice change. A fine addition to units on shapes and a perky read-aloud.

Geometry and Spatial

- ***PK-2***

When Sheep Cannot Sleep: The Counting Book

Kitamura, Satoshi

Woolly, 1 sheep, has insomnia, and so he goes to the meadow where he finds 2 ladybugs 3 owls, 4 bats, etc.all the way up to 22 "z's" when he finally nods off in an unoccupied house that he has discovered. The droll watercolor illustrations contain the items to be counted, but they are not enumerated in the text, and so it is a game to find and count them. An index at the end of the book lists the numbers and the items. This playful work is simpler than Anno's Counting Book (Crowell, 1977), which is more visually sophisticated and it is as irresistible as Lisa Campbell Ernst's Up to Ten and Down Again (Lothrop, 1986). Like Kitamura's What's Inside: the Alphabet Book (Farrar, 1985), this presents an engaging and fresh approach that young readers will enjoy on their own.

Number and Operation

- ***PK-2***

Who Sank the Boat?

Allen, Pamela

The Wing on a Flea: A Book About Shapes

Emberley, Ed