

In addition, two practical articles from the book can be read in their entirety from the website: Joseph Rosenstein's article *A Comprehensive View of Discrete Mathematics: Chapter 14 of the New Jersey Mathematics Curriculum Framework* contains a comprehensive discussion of topics of discrete mathematics appropriate for each of the K-12 grade levels accompanied by numerous suggested classroom activities. An article by Deborah Franzblau and myself *Recommended Resources for Teaching Discrete Mathematics* identifies outstanding discrete mathematics resources for the K-12 classroom, including books, modules, periodicals, literature, Internet sites, software, and videos.

*Discrete Mathematics in the Schools* is of interest to anyone who wants to listen to voices of experience to understand how and why discrete mathematics can be used to improve mathematics education. This volume makes the case that discrete mathematics should be included in K-12 classrooms and curricula, and provides practical assistance and guidance on how to implement this goal.

### ***Investigating with Power Solids***

by Erica Voolich

Cuisenaire, 1997

ISBN: 1574520296

Cost: \$9.95

Grades: 6-8

This practical book contains sixteen classroom tested activities designed to be used with the Power Solid manipulatives available through the Dale Seymour or Cuisenaire catalogs. These activities help students discover relationships between shapes; surface area and volume; and three dimensional shapes and their corresponding two dimensional nets. Each activity is accompanied by comprehensive teacher's notes, discussion prompts and an explanation of the mathematics behind each task.

Discrete mathematics connections are nicely made. In this book you will find activities or extensions on Euler and Hamilton paths and circuits, eulerizing, instant insanity (vertex coloring), sorting activities, Euler/Descartes vertices formula, pentominoes & hexominoes, patterns in nets of solids, and number pattern activities. Erica, the author and a 1994 LP participant, managed to include some mathematics history, which is one of her favorite topics.

### ***The Book of Numbers***

by John Horton Conway and Richard K. Guy

Springer-Verlag, 1997

ISBN: 038797993X

Cost: \$29.00

Grades: HS, College, Teacher resource

The new book in the Copernicus series by Springer-Verlag takes a comprehensive look at different aspects and kinds of numbers. It contains many non-standard ideas, examples, and things to think about. Chuck Biehl (LP in DM '90), a teacher from The Charter School of Wilmington, reviews it for us:

"*The Book of Numbers* is an extremely pithy and engaging look at all kinds of numbers, from naturals to irrationals to transcendentals and beyond. Since many types of numbers exist only in the arena of pure mathematics, applications for the novice are a bit strained, but this does not prevent this wonderful book from being an excellent professional resource as well as an inspiration for teaching interested students at a deeper level about number patterns and properties using a broad level of sophistication. Its intense nature makes it very educational for student and teacher alike."

### ***Cool Math: Math Tricks, Awesome Activities, Amazing Factoids and More***

by Christy Maganzini

Price Stern Sloan Publishing Inc., 1997

ISBN: 0843178574

List: \$6.95

Grades: 3-8

This interactive, playful introduction to the wonders of mathematics uses stories, history, a host of games, quizzes, hands-on activities, trivia, and more to explore some of the mysteries of mathematics and numbers. The book has many discrete connections including palindromes, counting systems, codes and ciphers, the Fibonacci Numbers, topology, Euler, the Konigsberg bridge problem, map coloring, probability, triangular numbers, square numbers and other number patterns.

I walked into the room where I was giving my discrete math presentation, and saw that the advertisement for my presentation had me talking about "discreet" math. So I quickly made a slide and put it up there..."You don't need to be discreet about discrete math."

—Linda Boland (LP '93)