ALGEBRA STARS

This new software package is designed for both beginning and advanced algebra students. My college-age son, a calculus student, was intrigued with the game and found it to be stimulating and addictive while practicing his mathematics skills. He commented that he wished he could have had this software when he was in high school. Although I had some difficulty following the directions for the game, my son had no such trouble.

The developers state that this software will advance students’ knowledge of the properties of number sets, help them use deductive reasoning skills, and improve their algebra fluency. I found that the package especially reinforced students’ understanding of quadratic equations and polynomials and addressed students’ skills with linear equations and inequalities.

STUDYWORKS! MIDDLE SCHOOL DELUXE MATH
Grades 6–8. PC with Pentium 133 or higher processor, Windows 95 or higher, 32 MB of RAM minimum, 48 MB or higher recommended, CD-ROM drive, SVGA or higher graphics card and monitor, $29.99. MathSoft Engineering and Education, 101 Main St., Cambridge, MA 02142-1521.

StudyWorks! was a welcome addition to my seventh-grade mathematics classroom. Designed for students in grades 6–8, this software delivers comprehensive middle school mathematics resources in a three-year, skill-building series. This program provides highly interactive lessons, helpful animations, mathematics tools, games, quizzes, and additional online content to enable middle school students to thoroughly master essential concepts at their own pace.

The virtual component of StudyWorks! was excellent. Students loved taking a walk through a virtual school building and mathematics classroom. The animations were also exceptional, providing helpful demonstrations for important lesson concepts. The adaptations to individual needs and the modular approach of the program were among its strengths. With this software, I was able to save valuable class time by selecting areas of emphasis for individual students. Another timesaving feature was the ability to print out tests, homework assignments, and activities, complete with graphs and text. The only potential weakness of this program was the amount of text that students must read. Some students may feel overwhelmed and confused when they first see the amount of written material in each module, but the animation features in the lessons should help with that potential problem.

I highly recommend this program. It reflects the NCTM’s Standards and has excellent features that can benefit teachers and students across the middle school mathematics curriculum.—Melanie Satterfield, South Lawrence Elementary School, Loretto, TN 38469.

MODULAR ORIGAMI POLYHEDRA

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THE QUICK REFERENCE GUIDE: TABLE OF STANDARDS AND EXPECTATIONS — Includes three 11” x 17” sheets; shows how the same mathematical idea grows and develops from one grade band to the next.
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FREQUENTLY ASKED QUESTIONS ABOUT PRINCIPLES AND STANDARDS FOR SCHOOL MATHEMATICS — provides answers to your questions about Principles and Standards and mathematics education issues. Revised July 2002.
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this book. The supply of constructions seems endless; just when you think you are done, you find more activities to try. The directions are fairly easy to follow (assuming that you have had some experience with origami or creating polyhedrons from paper). The book is geared toward upper-grade and high school teachers, although lower middle school students who are adept at origami will also appreciate these activities.

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Diagrams are consistent and plentiful throughout the book. Step-by-step directions guide the teacher or student through the construction process. The book might be more helpful if its pages were formatted to be photocopied onto overhead transparencies for whole-class instruction. Otherwise, this book may be useful for small groups of students who are confident in the skills currently being taught and need enrichment activities.

Although I have not used this book with my students yet, I would recommend it to any teacher who is not new to constructions with paper. Keep in mind that working with paper constructions requires some practice and patience. Happy folding!—Christopher Johnston, St. Paul Lutheran School, Chicago, IL 60631.

**PREALGEBRA MAKES SENSE**


This prealgebra series aims to build the foundation for algebraic thinking and may supplement or replace regular textbook units. It consists of six consumable books with a teacher guide for each and targets that curriculum compacting can free able children to teach other subjects in addition to mathematics. The six books work well as a series, but each book is priced separately and may be used independently. Although using consumable books can be expensive, I would highly recommend the interactive Prealgebra Makes Sense series because it is well written and offers engaging tasks to foster algebraic thinking.—Gloria Gombar, City Hill Middle School, Naugatuck, CT 06770.

**TEACHING MATHEMATICS TO ABLE CHILDREN**


Classroom teachers, administrators, parents, and teacher educators can all benefit from reading and reflecting on this book. Although the book is based on the author’s work with children in England who are comparable to able elementary school and middle school students in the United States, the book has significance for all educators, including parents.

The basic philosophy of Koshy’s work is that able students should have school experiences in mathematics that are both advanced and enhanced. The author argues that curriculum compacting can free time in the classroom for able children to learn topics that are considered advanced for their age group. Teachers are cautioned, however, that simply giving children a copy of a book intended for an older audience is inappropriate because the context and presentation of ideas have a great influence on children’s interest and understanding. Although recognizing that developing numerical fluency in all children is necessary and that such fluency is an indicator of able children, Koshy also argues, “. . . you are unlikely to notice a child’s ability to hypothesize and generalize if the work he or she is engaged in does not offer opportunities for demonstrating such abilities” (p. 25).

I found the book’s transcriptions of classroom discourse particularly helpful. This connection of theory to classroom practice was extended by the author’s habit of engaging the reader in reflective tasks. Readers are asked to make simulated curricular decisions on the basis of case studies, to consider issues raised in the book in relation to students they teach, and to respond to suggested classroom activities with a “tick” for approval or a “cross” for disapproval. These elements of the book, of course, illustrate as much about the author’s view of teaching and learning as do explicit discussions of the various points.

In addition to connecting the stages of Bloom’s taxonomy with tasks for mathematically able students, Koshy also addresses the role of technology. Classroom activities—those that require technology and those that do not—abound in this book. Interestingly, many of the activities, with their emphasis on student involvement in appealing contexts and open-ended formats, can be applied to the teaching of other subjects. Readers who teach other subjects in addition to mathematics—those that require technology and those that do not—will find this book useful.

For more information, contact the author directly. Readers will also be reminded that children with high ability levels are as deserving of our thoughtful attention as are all other children in our care.—Laura Sgroi, Rhinebeck, NY 12572.
NCTM membership is going online with **e-resources**—designed specifically with you (our members) in mind. It provides you with access to our database of award-winning journals, NCTM’s *Principles and Standards*, online mathematics resources, and more. Plus, you will be able to update your membership profile, from address changes to renewing online—it’s all at your fingertips.

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Visit [www.nctm.org/eresources](http://www.nctm.org/eresources) and find out what awaits you.
This book offers dynamic explorations to enable children to understand the measurement of distance, volume, weight, temperature, and time. The hands-on approach taken by the author will truly benefit kinesthetic learners. Each activity contains a list of easily attainable materials, along with clear diagrams and user-friendly graphic organizers, to investigate various aspects of measurement. The introduction to each section provides background information about the unit of measure to be investigated. Peppered throughout the activities are games to reinforce measurement skills, as well as “Brain Stretcher” questions to challenge students to think beyond the basic concepts. *Measurement Mania* could be used as a workbook for individual students or as a resource for teachers.

Although all the activities are appropriate for middle school students, some, such as using the circumference of a bicycle wheel to measure long distances, are time-consuming or not practical for the classroom. I would strongly recommend this book, however, for teachers who need fun activities to spice up measurement lessons.—*Ellen Mangels, Baltimore County Public Schools, Baltimore, MD 21204.*

**POLYHEDRA PASTIMES**


A well-documented resource for geometry enrichment, this book presents thirty activities for middle school students who are investigating patterns. Included with the activities are lists of all needed materials, vocabulary words, definitions, and student challenges or extension sections. The author has also scripted dynamic questions and teacher directions to help lead students through the activities. In addition, an appendix to the book offers information for extensions of each activity and related Internet sites.

Although some of the activities offer hands-on learning, others involve the use of an overhead projector or investigations on the Internet. From teaching about Platonic solids to recommending a Web site for growing crystals to reprinting some famous paintings, the book richly weaves together aspects of mathematics, science, art, history, and athletics. Although any one activity might be selected for a lesson, following the full series of activities in sequence would be valuable.

From a teacher’s point of view, this book is a fantastic resource. The directions are clear and thorough. The challenge lies in the execution of some of the activities: well-developed fine motor skills are a prerequisite for some of the hands-on work. The excitement of the activities, especially if students work in pairs, should make these explorations worthwhile. I strongly recommend this book for upper middle school students.—*Deborah D. Callahan, Belmont Hill School, Belmont, MA 02478.*

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**Do You Want to Add Your Two Cents?**

You may have opinions about articles or departments mentioned in this issue. Perhaps you have a classroom activity to share that is related to one of them. If so, please share them with other teachers by writing to “Readers Write,” NCTM, 1906 Association Drive, Reston, VA 20191-1502.