Math Books as Literature: Which Ones Measure Up?

Patricia Austin

With literature-based reading programs, the whole language movement, and reading across the curriculum, educators are frequently advocating the use of trade books rather than textbooks in schools. While the emphasis on trade books is largely positive, it also has a negative side. It has given birth to a whole new breed of books, texts that masquerade as storybooks. Although "a textbook by design and content, is for the purpose of instruction, a trade book by design and content, is primarily for the purpose of entertainment and information" (Lynch-Brown & Tomlinson, 1993, p. 2). Trade book publishers have noted that teachers want "real" books not just to teach reading but also to teach other subjects. Having identified a market, the best of the publishing houses, noted for fine award-winning books, have leapt onto the bandwagon to fill this purported "need" for stories intended not for entertainment or for information but rather to instruct. Most evident when math is incorporated into literature, such books distort the purpose of children's literature, are an insult to children's intelligence, and are potentially damaging to a child's motivation and interest in reading. These newly minted "math" books worry me.

In order to lay the foundation for shared understanding, let me first describe the role that literature plays in children's lives and learning as well as delineate the criteria by which we evaluate literature. I will then highlight several books that are examples of good literature that focus on math and contrast them with books that are examples of poor literature.

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The Role of Literature

Many of us assume that children read primarily in order to learn, and so our response to children’s texts focuses on the messages those texts might teach. But anyone who likes to read knows that we do so primarily because we enjoy it, not because it is good for us. Even if we do sometimes read because it is good for us, we take pleasure in how and what our reading makes us think. If we are going to recommend works of literature for children and to children, we should base our recommendations on the aspects of reading that make committed readers want to and like to read. (Nodelman, 1992, p. 11)

In short, the most valuable and important function of children’s literature is pleasure. Nodelman (1992) specifically identifies many of the pleasures we derive from literature, a few of which seem particularly pertinent as we consider books whose subject matter is math. We take pleasure in “making use of our repertoire of knowledge and our strategies of comprehension—of experiencing our mastery,” (p. 11) and we take pleasure in “recognizing gaps in our repertoire and learning the information or the strategy we need to fill them, and so developing further mastery” (p. 12). As we assimilate new information, we take pleasure in the newness. In picture books, we take pleasure in the images and ideas that the illustrations evoke and pleasure in the words themselves. In both stories and informational books that incorporate narrative, we take pleasure in the element of story. In all kinds of books, we take pleasure in structure and how the words form cohesive patterns and afford discovery of meaning.

Criteria to Evaluate Literature

To be sure, a blurring of fiction and nonfiction occurs in literature for children and that certainly holds true for many math-oriented books, but regardless of the genre, we want to be enriched by a book. Books classified as fiction or poetry should provide pleasure and insight. Traditionally, the most important criteria by which we evaluate fiction include elements of plot, characterization, theme, and style. A well-constructed plot is organic, growing naturally from the characters’ actions, and the characters must be convincingly real. Good books create contexts for children to find themselves and explore their worlds. A theme, or book’s significance, is most evident if a book can be read at different levels, that is, if a reader can discover layers of meaning. Style, perhaps the most elusive criteria, pertains to the author’s presentation of the story, the craft of arranging words and selecting images. Perhaps the best test of an author’s style is whether a book reads smoothly and effortlessly when we share it orally. If poetic form is used to tell a story, we evaluate how the rhythm and sound add to the meaning, whether rhyme is natural or contrived, and what sensory images are evoked. We look for imagination and freshness of both sound and sense (Huck, Hepler, & Hickman, 1987).

Books that are nonfiction should enable the discovery of factual or conceptual information. They should generate a sense of wonder and encourage a reader’s curiosity. “At their best, these informational books are characterized by beautifully written prose, definable themes, unifying structure and stimulating topics” (Carter and Abrahamson, 1990, xii). As Lukens (1995) states, “the
successful nonfiction book manages to supply information and yet make the reader sense that discovery is open-ended. There is more to be known, and finding out is exciting" (p. 272). The criteria I use to evaluate a successful book are summarized in Figure 1.

**Figure 1. Critical Guide to Evaluating Children’s Books with Mathematical Dimensions**

The book should:
- contain layers of meaning.
- enable natural connections to mathematics.
- provide opportunities for the reader to use math for authentic purposes.
- convey delight in mathematical inquiry.
- make use of a reader's repertoire of knowledge.
- invite the reader to learn something new.
- enable discovery.
- generate a sense of wonder.
- encourage a reader's curiosity.
- employ a humorous or conversational tone.
- stimulate and engage the reader.
- have a defined logical structure, either expository or narrative.
  - If the books is narrative in structure, the plot should grow naturally from the characters' actions.
  - If the book is in poetic form, rhythm and rhyme should be natural, not contrived.

**Math Books that Measure Up**

Welchman-Tischler (1992) points out that although many children’s books relate to mathematics, some are explicitly about mathematics and aim to teach specific mathematics concepts, while others are implicitly related to math. The latter suggest possibilities “for extended mathematical investigations” (p. 2). Many educators have explored the potentiality of teaching math with children’s literature, often emphasizing those books which involve math in subtle ways (Bresser, 1995; Burns, 1992; Harsh, 1987; Radebaugh, 1981; Sheffield, 1995; Welchman-Tischler, 1992; Whitin & Wilde, 1992).

The books mentioned and discussed below entertain as well as inform and at the same time recognize that math is exciting and intriguing in and of itself.
They focus explicitly on principles of math and are developmentally appropriate for all ages. Certainly young children can enjoy many of the books on one level, older students at another, deeper level.

The emphasis on trade books in schools has given birth to a whole new breed of books, texts that masquerade as storybooks.

Mitsumasa Anno, noted for his math books, has written Anno's Counting Book (1975), Anno's Counting House (1982), Anno's Mysterious Multiplying Jar (1983), Anno's Math Games (1987), Anno's Math Games II (1989), and Anno's Math Games III (1991). He has also coauthored Anno's Hat Tricks (Nozaki, 1985) and Socrates and the Three Little Pigs (Mori, 1986), challenging books most suitable for an audience of at least fourth grade and up. I have chosen to examine in some detail a nonfiction title, Anno's Math Games II which is divided into five sections, The Magic Machine, Compare and Find Out, Dots, Dots, and More Dots, and Counting with Circles. Each section expounds and expands on the rich possibilities that a mathematical look at the world offers. The first section begins as follows: "Kriss and Kross have invented a wonderful magic machine. They've just finished working on it. Their machine has two openings. If something is put into the opening on the left, it comes out as something different on the right" (Anno, 1989, p. 4). When the controls on the machine are continually changed, text and picture together stimulate readers to figure out the operative principle. For example, the left-hand side of one spread shows 3 children, 2 bugs, and 5 beans; the accompanying text states: "The controls on the machine have been changed again. What in the world is it doing now?" (p. 12). The right hand side shows 6 children, 4 bugs, and 10 beans. The accompanying text states, "Now Kross is putting in four glasses of juice. What are going to come out?" (p. 13). The questions posed to the reader in Anno's Math Games books are playful; the answers are not always obvious and demand searching. They pique a reader's interest—not only the child enjoying the book but the adult who may be sharing it with the child. Anno also intersperses his books with humor. For example, he ends The Magic Machine section this way: "Uh-Oh! [Kriss and Kross] used the machine so much that it finally broke down. Does your head ever feel all confused and muddled like that?" (p. 18). The accompanying surrealistic illustration, showing such things as a rose whose stem is a curved green pencil and a kettle whose spout turns in rather than out, are delightful.

Throughout the book the gnomelike characters of Kriss and Kross explore mathematical concepts of matching, sequence, ordinal numbering, measurement, direction, and multiplication and in their own quest invite young readers to explore with them by making comparisons, finding similarities and differences, and deducing principles from examples given. The characters visually explore the number system and how symbols can express a numerical value;
they see how the point as defined by mathematicians is the dot that pointillists use in creating magnificent paintings and the atom that scientists have discovered makes up everything in the world. Anno shows how math is inherently a part of everyday life and he makes natural, not artificial connections.

In an afterword, probably intended more for adults than for children, Anno further enlightens and challenges his readers. In writing about The Magic Machine, for instance, he states,

Because “relationship” is a concept that exists only in our minds, not in the real world, we can use the notion of the magic machine to represent this concept. In a way the machine is like our minds, which can imagine or fantasize all sorts of connections. Unlike this machine, which has limits, the world inside our minds has unlimited possibilities. . . . It is the ability to engage in such relationship-seeking that enables imaginative problem solving to take place.  
(p. 98)

Anno here articulates the heart of mathematical inquiry—relationships.  

How Much is a Million? (Schwartz, 1985), a picture book with whimsical cartoon illustrations by Steven Kellogg, explores just that—the concept of large numbers. Marvelosissimo the Mathematical Magician, pictured beside his magic balloon, wearing wizardry garb and with wand in hand, takes young readers on a journey. He proclaims, “If one million kids climbed onto one another’s shoulders, they would be taller than the tallest buildings, higher than the highest mountains and farther up than airplanes fly.” Truly capturing objects and activities familiar to the young child, the magician employs two more comparisons—“if you wanted to count from one to a million . . .” and “if a goldfish bowl were big enough for a million goldfish . . .” He then explores the same notions with a billion and a trillion, each time positing mathematically accurate possibilities as the basis for his seemingly fantastic comparisons. In a note from the author, Schwartz invites readers to take the arithmetic journey that offers the proof or explanation supporting the comparisons. For example, to calculate the height of a million children, he selected the average height for elementary-age students (4’8”).

Since the shoulders of a 4’8” child are about four feet high, the height, in feet, of a tower formed by children standing on each other’s shoulder would equal four times the number of children involved . . . four million feet high which is approximately 757 1/2 miles. [4,000,000 feet divided by 5,280 feet per mile] . . . Mt. Everest . . . is 29,028 feet (5 1/2 miles) . . . the highest any airplane has ever flown is 86,000 feet (16 1/4 miles).

Once again, the author plumbs the core of mathematics—relationships. Schwartz and Kellogg (1989) collaborated on another book that is similar in tone and equally enjoyable and informative, If You Made a Million. With both books, even if children read for pure enjoyment, they will gain some sense of the immensity of large numbers. They can choose, however, to fully explore the math problems or even create new comparisons and figure them out mathematically. Either way, the books convey delight in mathematical inquiry.

Whitin and Wilde (1992) acknowledge that “much has been written about ‘math anxiety’ and its effects on the attitudes and literacy development of learn-
ers [and they purport that] children's literature can help to alleviate some of that anxiety" (p. 9). *Math Curse* by Jon Scieszka and Lane Smith (1995) is just such a book. Literally about math anxiety, it follows the thoughts and adventures of a young girl whose teacher, Mrs. Fibonacci, challenges the class "to think of everything as a math problem." Soon enough she realizes that Mrs. Fibonacci has put a math curse on her, because from the moment she wakes up, each step of her day does indeed become a problem. For example: "I have 1 white shirt, 3 blue shirts, 3 striped shirts, and that 1 ugly plaid shirt my Uncle Zeno sent me. 1. How many shirts is that all together? 2. How many shirts would I have if I threw away that awful plaid shirt? 3. When will Uncle Zeno quit sending me such ugly shirts?" Continually, the questions juxtapose the factual and the absurd, interjecting a light tone, as does Anno. In another example, when "lunch is pizza and apple pie. Each pizza is cut into 8 equal slices. Each pie is cut into 6 equal slices. And you know what that means: fractions." In boxes below the text are these questions: "1. If I want 2 slices of pizza should I ask for a. 1/8 b. 2/8 c. 2 slices of pizza?" Through funny examples rich with a natural voice, the authors use all four basic math operations as well as graphing different number systems, money, and logic. The book comes elegantly full circle when the math curse is broken "and life is just great until science class, when Mr. Newton says, 'You know, you can think of almost everything as a science experiment. . . .'. "

Math books that don't measure up are contrived and fail to support the logical, natural means through which children learn.

From the front book jacket flap which states "For ages > 6 and < 99," and which gives the price of the book in the binary number system to the back flap which shows the books of this creative collaborative team in a Venn diagram, the book is filled with wry humor. Because of the humor, readers are far more likely to be enticed to answer the math questions. Along with a good laugh, they want to show their mastery of math. They are aware throughout the book that there's more to know (like the subtle touches of the teachers' names and the connection to the subject matter). Thus, this book, as are the books by Anno and Schwartz, is the kind of book that children will return to again and again.

Math Books that Don't Measure Up

The books described below are representative of the response of three publishing houses to the misconstrued notion that educators need books whose primary function is to instruct. While good books, such as those discussed above, provide both a pleasurable literary experience and the opportunity for children to use math for authentic purposes, the following books are contrived and fail to support the logical, natural means through which children learn.
Sea Sums (Hulme, 1996), a strikingly illustrated book in rich gouache tones, is a book of verse that attempts to integrate descriptions and habits of marine animals with the concepts of addition and subtraction. It begins as follows:

In an underwater grotto,
Where the sea is warm and blue,
There are creatures to be counted
In every shape and hue.
We'll have a great adventure,
An encounter face-to-face,
While we're adding and subtracting
In this coral-reefy place. (p. 5)

What follows this sing-song introduction are math problems and verses served as a combination platter. For example:

One siphon sucks in briny brew.
One siphon spouts it out.
Two siphons pump seawater through
While food is filtered out.
1 siphon + 1 siphon = 2 siphons (p. 7)

What could be a fascinating description of the eating habits of a giant clam is overshadowed by the irrelevant emphasis on math and by the poorly written verse. In another example:

Two spiny, spiky urchins
Come creeping from a cave;
Three others rest next to the reef,
Where they just point and wave...
2 urchins + 3 urchins + 1 urchin = 6 urchins. (pp. 12-13)

Besides the anthropomorphic feel to the line “they just point and wave” (frowned upon in any work of nonfiction), the superimposed fixation on counting and adding these beautiful and intriguing creatures leaves the reader with only one question—Who cares? The entire text continues in a similar vein. Forced verses, which simply can’t be called poetry, describe some action in the ocean; the number words are written in bold italic type; at the end of the verse, a math problem is given, this time with the numerals in bold typeface. The features of this book just don’t add up.

Fraction Fun (Adler, 1996) is a basic introduction to the concept of fractions. As a nonfiction title, it begins with a vibrant splash. Spirals of turquoise and royal blue provide the background for fractions represented both in numerals and by everyday things. The text on page one states simply: “A fraction is a part of something.” The illustration truly elaborates on and expands the words. The slice of pizza, representing a part of a whole, the pictured quarter representing part of a dollar, the watch at ten minutes past suggesting part of an hour, and the half-filled glass provoke the reader to think about the meaning of
the simple text. Since the book is intended for young children, the exposition within the first 8 pages of text, which provides examples of fractions and sets forth definitions, is appropriate and informative.

The remainder of the text, however, mimics both the content and layout of a math workbook or text when it states: “Now let’s do some pizza math. . . . To do pizza math you will need: three paper plates, all the same size, a pencil, a ruler, and red, green and blue crayons” (Adler, 1996). What follows is a colorful example of exactly the kinds of problems found in a math textbook. For example: “With the pencil, mark the center of each plate. Using the ruler, draw a straight line through the mark from one edge of the plate to the other. The lines you drew divided each plate into 2 equal parts. Each part is 1/2 of the plate” (Adler, 1996). Although the author may well have intended to invite interaction, the attempt is uninviting at best. The problems and projects are plodding, neither sparking a child’s interest nor provoking thought. Even the over-eager bug-eyed cartoon dog who salivates at the mere thought of the pizza is not enough to distinguish this book as a trade book that entertains and informs, distinct from the intended instructive purpose of a textbook.

Another publisher has endeavored to create “real” books that blur the distinction between textbooks and trade books with an entire series, designated as MathStart. The series is divided into three levels that the publishers claim to be “developmentally appropriate and correlated to school grade levels and the curriculum standards of the National Council of Teachers of Mathematics.” Each book focuses on a specific concept. I’ve selected one book from each level of the series to discuss.

Anno, Scieszka, and Schwartz employ a genuine sense of wonder by creating characters who experiment and who wonder.

* A Pair of Socks (Murphy, 1996a), intended to teach the concept of matching to preschoolers and up, is a rhyming verse in which a lone sock, emerging from its home in a dresser drawer, searches for its mate. The search begins in the bag for dirty laundry, continues in the washing machine, and then in the dryer and laundry basket. One sock is described as warm and fluffy, not just red and blue. Another sock is described as folded and puffy, “But spots are wrong, too” (Murphy, 1996a, p. 16). Clearly, this particular sample of the text sacrifices sense for rhyme, juxtaposing concepts that don’t connect. The words “fluffy” and “puffy” describe how the sock feels when warm from the dryer as if that’s mutually exclusive from the words that describe how the sock looks. If readers were to try to logically analyze the verse above, they would be led to believe that a sock could not be both warm and fluffy and red and blue.

Regardless of sound and sense, though, the plot thickens. The dog runs off with the sock and voila! The searching sock finds its missing mate in the dog’s
bed. But alas, the match has a torn heel. Not to worry, the problem is solved with a patch to match. The closing two-page spread then asks the reader to find a match for each pictured sock.

Level 2 books are intended for Grades 1 and up. In Get Up and Go! (Murphy, 1996b), the text alternately reflects the thoughts and activities of first a dog and then a little girl (each represented by different typeface) as the girl gets ready to go to school:

You’re always so slow.
Let’s get up and go!
Just 5 minutes more
to snuggle with Teddy.
If you don’t get up
you’ll never be ready.
A 3-minute stop—
that’s all I’ll take.
I’d better see
how much time that will make.
She’s already late—so I’d better try
to keep careful track of the time going by. (pp. 4–10).

The rhyming verse is poor at best, but then to add insult to injury, the story is rudely interrupted by a math problem. The dog constructs a time line that shows the minutes ticking by as the little girl hurries to accomplish myriad morning tasks:

I can show her 5-minute snuggle with Teddy like this.

I I I I I I

3 minutes to wash looks like this.

I I I

Now I’ll put my lines together.

I I I I I I I I I I I I

How many minutes have gone by so far? (p. 10)

The rest of the text continues in this manner.

Whitin and Wilde (1992) state that “children’s literature restores a meaningful context to the use of numbers, since mathematical concepts are naturally embedded in story situations” (p. 4). However, when an author contrives a story to make explicit what is natural, the result is unsatisfactorily didactic and insulting to young readers.

Level 3 of the MathStart Series, intended for grades 2 and up, purportedly builds on levels 1 and 2 with multiplying and dividing, building equations, and problem-solving strategies. Too Many Kangaroo Things to Do! (Murphy, 1996c) uses a cumulative storytelling technique as the kangaroo asks first one emu,
then two platypuses, then three koalas, and last four dingoes to play with him. Each animal refuses to play, repeating the refrain, “Sorry, Kangaroo, I have too many emu things to do” (p. 5) or “too many platypus things to do” (p. 11). This story, potentially cute and playful in its use of language, is once again interrupted by a series of math problems. If three koalas “each have to find one box, wrap it with two sheets of wrapping paper, tape it with three pieces of tape, and tie four ribbons into a big bow,” (p. 19) the reader is shown, with a math problem, how many “koala things” the three koalas have to do. Interspersed throughout the narrative, the pages with the math problems look for all the world like a math textbook with cutesy illustrations.

The trade books that seem more like textbooks contain no layers of meaning, are didactic, and are written for adults to use with children to instruct.

Each of the books in the MathStart series concludes with a “For Adults and Kids” activity page. Akin to a teacher’s manual, not at all like the insightful afterwords in the Anno and Schwartz books, the pages proffer the obvious, suggesting to the adult first how to read the book with a child and second how to extend the learning with additional activities. As in Fraction Fun (Adler, 1996), the activities are largely uninspired and tedious.

The final item on the “For Adults and Kids” page purports to direct readers to other books that include some of the same concepts. Although some of the titles may be appropriate to engender a discussion of math; others are wholly inappropriate. For example, the classic Caps for Sale (Slobodkina, 1940) is intended to tell a story, not to teach a concept. A man selling hats has all his hats stolen by monkeys as he naps one day under a tree. The man first talks to the monkeys demanding that they give his caps back. He then shakes his hands and stamps his feet in angry fits demanding his hats back. The monkeys, of course, simply imitate the man’s actions. The delight for the child is understanding the joke of how the man ultimately outwits the monkeys and retrieves his hats. To suggest that the book includes or teaches the mathematical concept of matching as cited by Murphy (1996a) is to trivialize an otherwise delightful and clever story by turning it into a math lesson.

The premise of the MathStart series as stated on the back cover of each book is that “everyday life is the basis for each entertaining story. Simple math concepts are embedded in each story so that young children intuitively understand them.” Indeed, this premise captures the intent of similar books of other publishers. Ironically, however, such a premise implies an unspoken and deeper underlying premise—that math is boring and has to be embedded in something to make it palatable. While authors and publishers would undoubtedly
deny such a charge, the books themselves are evidence enough. Regardless of whether or not the form matches the content, four of the five books discussed above are written in verse because the publishers know that rhyme and rhythm have a natural appeal to children. Additionally, the trade book editors have selected top-notch illustrators such as Lois Ehlert, G. Brian Karas, and Kevin O’Malley to liven up the insipid text of the book itself in yet one more attempt to disguise the instructional purpose. They’re banking on the fact that, as author/educator Mem Fox (1987) states, “top quality illustrations not only sell books to children, parents, teachers, and librarians, they sell reading to children” (p. 31). Colorful pictures aren’t enough, however, or shouldn’t be. In the best of picture books, the text and illustrations must work together as a work of art, each complementing the other. Unfortunately, these texts offer plots that aren’t organic and characters who are mere clones of Dick and Jane. Themes are nonexistent, and stylistically, the books are inexcusable. When we see information in a story for children, we expect it to be relevant (Lukens, 1995), but the mathematical information that interrupts both *Sea Sums* (Hulme, 1996) and the MathStart stories is wholly irrelevant. If only the art is quality, the total package is less than satisfying and defeats the nature of a picture book.

Short of a teacher or well-meaning parent waiting for and prodding the child to answer the questions, I can hardly imagine the child reading alone any one of the five books discussed and feeling the slightest inclination to answer the questions. When children are didactically shown something and asked to participate—for example, “pretend each red section is a slice of pizza,” and then asked, “which slice is the largest, 1/2, 1/4, 1/8? Which is the smallest?” (Adler, 1996)—they are being coerced. The text does not offer a chance of discovery, is not open-ended, and provides little sense that “there’s more to be known,” and even less of a sense that “finding out is exciting” (Lukens, 1995, p. 272).

Anno, Scieszka, and Schwartz employ a genuine sense of wonder by creating characters who experiment and who wonder. Their books contain layers of meaning, are playful, and capture a child’s imagination. As noted author and critic Aidan Chambers states, “every book, no matter what its content and purpose, deserves and demands the respect and treatment—the skill and care—of art” (in Carter & Abrahamson, 1990, ix). *Anno’s Math Games II, How Much is a Million?* and *Math Curse* achieve that art, whereas the books by Murphy, Hulme, and Adler do not. When the publishers claim that “math concepts are embedded . . . so that young children can intuitively understand them,” they aren’t giving children the credit they deserve for being able to see through the contrivance. The trade books that seem more like text books contain no layers of meaning, are didactic, and are written for adults to use with children to instruct. In fact, they are less trade books than lavishly illustrated, expensive and overproduced workbooks.

If children are exposed to a steady diet of workbook-like texts that masquerade as storybooks to enjoy, their enthusiasm for other, authentic books may well be dampered. In *How to Use Children’s Literature To Teach Mathematics*, Welchman-Tischler (1992) claims that “in any use of children’s literature to teach mathematics, the fundamental impression of the story should not be distorted by any undue emphasis on a mathematical aspect” (p. 5)—an honorable claim. While some of the suggested extension activities in her text are appropriate,
many sample activities contradict her claim. For example, when she too inappropriately recommends the use of *Caps for Sale* as an introduction to manipulatives to teach “patternning, counting, addition, and subtraction” (p. 16), the discriminating reader becomes suspicious of the author’s intent. When Radebaugh (1981) recommends that stories such as *The Three Little Pigs* and *The Three Billy Goats Gruff* can teach number concepts to the very young, we know that the problem of the educator’s distortion of literature to teach mathematics is not a new problem.

If we, as teachers, choose to share inferior books with children, we’ll be conveying the unspoken premise that undergirds the books—math is boring unless we hide it.

**Closing Comments**

For teachers who do want “to bring mathematics into the integrated whole and to make it possible for children to have the same authentic experiences with math that they are coming to have with language, social studies, science, and the arts” (Goodman in Whitin & Wilde, 1995, xi), resource guides do exist that inspire such connections (Burns, 1992; Bresser, 1995; Sheffield, 1995; Whitin & Wilde, 1992, 1995). The authors of these guides, both teachers and teacher educators, relate how they extended story books as well as concept books in order to explore mathematics in real classrooms with real children. They offer not only detailed procedures but also delightful examples of students’ products. They further state that they see their own ideas not as prescriptions but as starting points for other educators to adapt. When Whitin and Wilde (1992) developed their first resource guide to books that have mathematical dimensions, they also provided suggestions about appropriate use of books, emphasizing that “they are first and foremost good literature” (p. 18). They advise us as teachers not to destroy the magic of a story by interrupting with mathematical questions as you read it aloud. Each book is a unique literary experience and should be enjoyed for its own sake. The first step in any of the explorations . . . suggested is an uninterrupted reading with time for spontaneous, unstructured personal response. (p. 18)

Marilyn Burns (1992) also cautions, “don’t feel the need to ‘mathematize’ books at every opportunity” (p. 2). Their advice is well taken. Unfortunately, some books that are published in the guise of making math fun do not measure up as literature and do not provide literary experiences and these books are proliferating at an enormous rate.
When the teachers and preservice teachers with whom I work at the university peruse math books like the MathStart series and make comments like, "What a cute way to integrate math into the curriculum," I worry more. I know the current dictum within our field (to teach across disciplines) is brainwashing a numbed populace. I know the ruse of the publishers (the colorful illustrations) is working. Too many educators are being hoodwinked. If we, as teachers, choose to share inferior books with children, we’ll be conveying the unspoken premise that undergirds the books—math is boring unless we hide it.

**Call to Action**

As Norton (1991) and Cullinan (1981) point out, adults have a responsibility to see that books play a significant role in the lives of children, and they have an equal responsibility for selecting books that will “help children become aware of the enchantment of books” (Norton, 1991, p. 2). Both as individual educators and as members of professional organizations, we need not only to recognize this responsibility but also to take it to heart. As Peter Hunt (1995) points out, the professional organizations could play a role in demanding better books and publicizing mediocre books. With the need to be vigilant in demanding quality, we must be aware of our own responses to literature.

When I read Math Curse to a group of adults, they laugh. They enjoy the word play and the subtle humor. When I share books by Anno, adults are as quick as children to respond spontaneously to the mathematical questions posed. And when I read them Anno’s Hat Tricks, a book about binary logic, the adults are as challenged as the children. We need to recognize books for what they’re worth, and then we need to hit the publishers where it hurts. Publishers do respond to the market. If the math books that don’t measure up continue to sell, similar ones will be published. This is one trend that should be nipped in the bud.

We might, in fact, guide our selection of what we share with children and recommend to children by C. S. Lewis’s (1947) statement that “no book is really worth reading at the age of ten which is not equally (and often far more) worth reading at the age of fifty” (p. 100). Using trade books rather than textbooks and incorporating literature into mathematics learning can both be viable practices, but let’s not destroy either literature or mathematics in the process.

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**Children's Books Cited**


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