

[MATH LITERACY

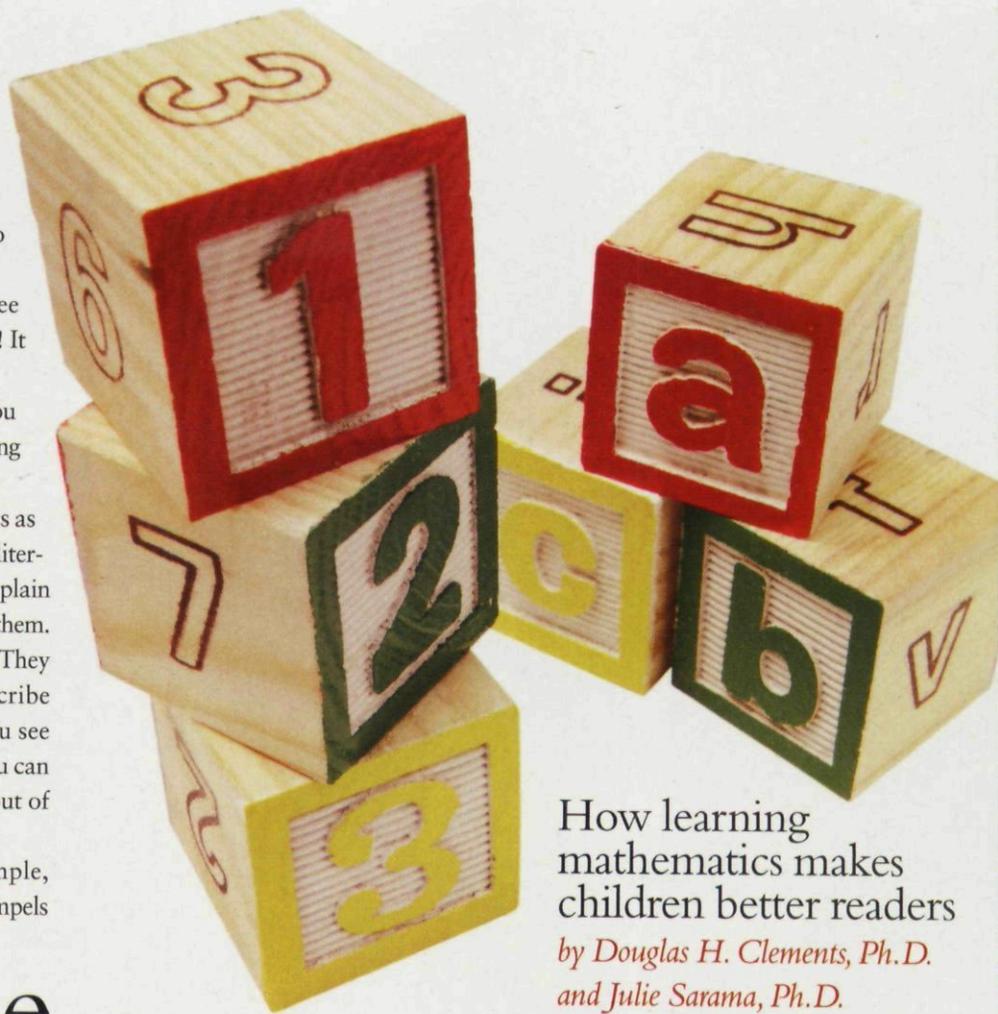
T “That’s *not* a triangle! It’s way too skinny!”

“But it *is* a triangle. It’s got three straight sides, see? One, two, three! It doesn’t matter if I made it skinny.”

Listening to these two children, you can’t help but wonder: Are they talking about math—or language? Or both?

Most people think of mathematics as wholly separate from language and literacy. But scratch the surface, and it’s plain that there’s a lot of overlap between them. Consider the children’s arguments: They were using language terms to describe mathematical principles. Once you see and understand that connection, you can help your children get more value out of learning both disciplines.

Talking about math, for example, helps kids increase vocabulary. It compels



How learning mathematics makes children better readers

by Douglas H. Clements, Ph.D.
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The Number-Letter Connection

them to really think about the meaning of words. Mathematics requires *precision* in language. For example, the word “straight” may mean “vertical” in some contexts. In mathematics, it’s defined as not having curves.

It’s obvious to parents that, as their child’s vocabulary increases, their child is better able to understand the stories he hears. What’s less obvious is how many mathematical words and ideas are important for appreciating stories. Think of “Goldilocks and the Three Bears.” There’s a number—three—right away. But there is also the mathematical principle of *ordering* (small, medium, large and cold, warm, hot); *correspondences between ordered sets* (the small-

est bed for the smallest bear, the next larger for the next larger bear); and *patterning* (the repeated too little, too big, just right). This familiar tale, and many other stories, depend on logical thinking, which involves *classifications* and *conditionals* (if/then thinking).

Just as learning math helps kids build language skills, getting more proficient with language also supports your child’s math skills. Often, children who do better in mathematics have the ability to *explain* and *justify* it. So, keep reading to your child and encourage him to tell the story back to you. Try these strategies:

• **As you read stories**, talk about the numbers, orderings, correspondences, and patterns you see in books.

• **Name groups of things** with numbers and shape names. You might say, “Look at those *three* beautiful flowers. What shape are those petals?”

A teacher we worked with who was worried that focusing on math would sacrifice language skills said it best: “When I stepped back and looked, I realized doing math was doing language.” P&C

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