



Stuart J. Murphy

**Author Program In-depth Interview
Insights Beyond the Movie**

Stuart J. Murphy, interviewed in his studio in Boston, Massachusetts on August 15, 2002.

TEACHINGBOOKS: MathStart books visually demonstrate math concepts to preschool and elementary school children. What is your background that led to the genesis of this series?

STUART J. MURPHY: I used to be a designer at an educational publishing house, and I became particularly concerned with the fact that children are visual learners. They learn a lot from visual material, but I realized that a lot of educational scrutiny didn't go into the visuals that accompanied the text.

Kids are brought up in a very visual world, yet I think a lot of materials that children are presented with don't really speak that visual language to them. We don't take proper advantage of visual language to use it as part of their learning system. I want to see more attention paid to how our kids learn and express themselves.

So, I decided to really try and figure out how the visuals that I'm working on can help to teach kids whatever we're trying to teach them. I make sure that the work I do responds to the need that children have to be spoken to visually.

TEACHINGBOOKS: Please give an example of speaking to children visually as opposed to verbally.

STUART J. MURPHY: A lot of times, a graph or a chart makes two comparisons for children much more quickly and much more easily than that same information would come to them if it were in text form.

If you're trying to show different sizes, for example, instead of just talking about something being big and something being bigger and something being biggest, and using those words for that, I think it's better to show it, to demonstrate it, and the words almost become secondary to the visual imagery of realizing what those comparisons are.

TEACHINGBOOKS: In 1980, you founded a relatively large publishing company that brought to life your goal of creating visual learning materials.

STUART J. MURPHY: I formed with a business partner our own company, called Ligature — meaning a connection between two things. We developed products for educational publishers with a team of visual and verbal people working together. We'd basically build the framework for a chapter, and then we'd set out to simultaneously have the artwork created, find the photographs and write the materials. These would then come together, producing something that was a seamless expression of the idea with the visual and the verbal melding together, all presented for children.

TEACHINGBOOKS: How did your work with Ligature lead to the MathStart series?

STUART J. MURPHY: I knew that presenting mathematical ideas to kids with visual support would be a lot easier for them because they are visual learners. And adding a storyline would help motivate children to find the right answer.

This belief led to my thinking that if high school kids will learn math better if it's presented to them in the context of a story and with good visual support, why don't we start kids out that way?

A lot of children get turned off by math in second, third, fourth grade. So if I could get them to the point where they thought math was fun, engaging, interesting and became involved in it and cared about the outcomes of it, then they would do a better job.

Mathematical content put in the context of a story with good visual support — that was my vision for MathStart. It's pictures, words and math coming together to tell a story.

TEACHINGBOOKS: Please give an example of visually presenting math concepts in your books.

STUART J. MURPHY: The mathematical concepts in MathStart books are kept very, very simple. For example, when kids learn about fractions they learn about halves and quarters, and then they cut whatever it is, the pizza, one more time and learn about eighths, and then they cut it one more time and learn about sixteenths. I found that if kids really didn't understand halfness, they're not going to understand sixteenthness.

TEACHINGBOOKS: Where do ideas for your stories come from?

STUART J. MURPHY: All the stories grow out of either my experiences as a child, my experiences as a parent or from watching my nieces and nephews and grandchildren. I actually follow kids around a lot. I watch what they read, what they look at. I make sure I look at the kids' stuff in bookstores, what today's magazines look like, and just try and picture myself in a kid's world to make sure that my stories are relevant to their eyes.

All of the MathStart books take an important mathematical topic — pictures, words and math — and put it together into a story. The story is something that kids could imagine themselves doing or experiencing or being a part of, something that's relevant to their lives. And when that story gives good visual support to the mathematics, then kids who are visual learners are able to understand it.

TEACHINGBOOKS: Please share a specific example of where one of your stories came from.

STUART J. MURPHY: I wanted to write a book about classification, and I thought a story about sticker collections would be relevant, because kids were doing sticker collections at the time, and you can separate them in different ways. You can put all the flower stickers on one page, all the flag stickers on another page, all the yellow stickers on one page, and you're classifying by those different attributes.

I was visiting with my sister-in-law for dinner, and I started talking about this book. And my niece, who was in third grade at the time, didn't say a word during dinner, but by the

time I got home, there was an e-mail waiting from her. She said, “Dear Uncle Stu, stickers are out. Rocks and minerals are in. Love, Nina.”

So I thought, “okay,” and I went over to Dave’s Down-to-Earth Rock Shop, and there was Dave showing kids a fossil that cost something like \$2,000, and the kids were all looking at it and trying to figure out why it could cost \$2,000. I mean, they weren’t trying to buy it, but they were buying shark’s teeth and polished rocks and all that sort of stuff.

I started talking to Dave and watching those kids, and I thought, “She’s right. Rocks and minerals are in.” This will get kids really excited. So that led to my classification story called *Dave’s Down-to-Earth Rock Shop*.

So that’s an example of kind of figuring out where kids are, what they’re interested in, what they might be doing, and then following through and trying to apply that to a story.

TEACHINGBOOKS: What other kinds of background work and research do you do for your books?

STUART J. MURPHY: I always make sure that I’m current with the standards of the National Council of Teachers in Math, the scope and sequences of most major textbook programs. I make sure that I understand what kids are supposed to be learning and what they’re comfortable with during those first years of school, and even in their preschool work. I’ve got a running list of math concepts in my head.

At the same time, I pay a lot of attention to what kids are wearing and what kids are doing and what they like to say and what kind of language they use when they’re talking to me or to other kids or to teachers, what their interests are, what magazines they look at, and what sports they’re involved in. I keep these two lists going at the same time.

TEACHINGBOOKS: Describe the process of writing and designing a MathStart book.

STUART J. MURPHY: I start working with pictures, words, and math right from the beginning, but the math isn’t complete yet. And the words aren’t full sentences. And the pictures are just rough sketches. But, they’re all at the same level, and I do lots and lots of sketches and work on lots of different kinds of paper as I develop my ideas.

I make particularly sure to sketch out all the math models. I think those are really critical for the illustrator to be able to see the math modeling and how the mathematics works visually. I provide these as part of the manuscript, both for my editor, our math consultants and the other people that we work with, and for the illustrator who is going to be working on the story.

When I started working on the series, I used to sketch out the whole story. But I learned that the illustrators analyze the story and go through the pacing very well on their own. So, now I sketch out the math concepts, but not necessarily the entire storyline of the book.

TEACHINGBOOKS: How do MathStart books help children with math?

STUART J. MURPHY: MathStart books help children by providing them with a clear, easy and comfortable way to be introduced to mathematical concepts. Instead of feeling like, “Oh, I’ve got to learn about probability, multiplication or division and thinking about what does that have to do with me,” they help kids by showing them that these difficult-sounding topics, in

fact, are comfortable topics that they can learn, become familiar with, and can advance forward into learning more easily.

So I think the MathStart books help to engage children in learning mathematical concepts. I think they help them be at ease and comfortable with mathematics.

TEACHINGBOOKS: Is there something else you're hoping children take from reading MathStart books?

STUART J. MURPHY: I really want to make sure that kids understand that math is relevant to their lives. It's not a make-believe subject. It's not a theoretical subject. It's not some abstract thing that you don't really have to know. You have to know it, and you have to understand it. You use it all the time. You use it every minute of your life. And if you can see that, if you can just see math going on in the context of a story that's about you or someone like you, then, in fact, you get more interested in it.

TEACHINGBOOKS: What do teachers get out of your books?

STUART J. MURPHY: I think the teachers find that my books are helpful ways for them to introduce mathematical ideas to their students. First of all, I think that it's important to realize that a lot of teachers who teach primary school aren't necessarily themselves comfortable with mathematics as their primary topic. Most people who teach primary school are excellent reading teachers, are excellent at developing language arts capabilities in their students. They're great caregivers. They're lovers of children and care deeply about the welfare of their children. But most people who are highly schooled in mathematical education, and science education, don't become primary school teachers.

What I'm trying to do in the MathStart series is take primary teachers' strong suits, reading, language arts, stories from real life, stories that kids care about, and offer a vehicle for them to be able to use their strong suit to teach mathematical concepts.

TEACHINGBOOKS: Your books always conclude with some informational end matter.

STUART J. MURPHY: At the back of my books, I always have two pages of information. The first page is how to use the book most effectively, what to review, what to repeat, activities that you can do along the way to help a kid become more engaged in the story.

The second page has three or four activities that a teacher or a parent could do with a group of children that contextualize this math concept. The activities can be done when you're folding the laundry or when you're counting change or when you're going to the store and all the kinds of things you do with your children in real life experiences.

And then, at the bottom of that page, I have a very short bibliography of three other books that aren't by my publisher or me, but are other books that can be used to teach the same math concept. I feel very strongly that if you've got a kid engaged in learning math through stories, give him or her another story.

TEACHINGBOOKS: Have you always been interested in putting pictures and words together?

STUART J. MURPHY: I was one of those kids who drew all the time, and I used to love to draw and sketch and make my own little books and my own little pictures and my own cartoons and that sort of thing. I was the kid who always got picked to do the bulletin board.

TEACHINGBOOKS: You have an illustration degree from the Rhode Island School of Design (a school associated with so many successful illustrators: Chris Van Allsburg, David Macaulay, David Wiesner and many others), but you don't illustrate your books.

STUART J. MURPHY: Yes. That's because other people are more capable of illustrating characters and repeating them throughout an entire story than I am. So, I create rough sketches for my books, and an illustrator takes it from there.

Having an illustrator take my sketches and illustrate the stories actually makes a better book. It has somebody else thinking of things that I'm not thinking of and working to shape what becomes the final story. It's really wonderful to have another mind come in and work with you and look at what you're doing, and to be flexible enough to be able to respond to that.

TEACHINGBOOKS: What surprises students about you when you visit schools?

STUART J. MURPHY: Kids want to know if there are any tricks and anything that they can employ to make their writing better. I tell them one of my tricks to writing is I kind of pretend I'm in my own story. And, of course, they look at me and say, "You write stories about ducks and you write stories about cows. How can you pretend you're in your own story?" And the answer is, I do.

TEACHINGBOOKS: Describe a typical workday.

STUART J. MURPHY: I keep pens and markers and paper with me all the time, because I find that I get ideas at times I don't expect to. So, by the time I'm physically working on a story, I have lots of scraps and notes and things I've made on airplanes and when I'm walking down the street or when I've been sitting around somewhere. And some of these are little sketches, and some of them are a couple words, and some of them are a lot of words. These become the story idea and are my background information, my research.

I like to work in a fairly big space. I like a lot of open space around me because I like to spread out my research notes and thoughts I've jotted on scraps of paper.

When I start to really work on a story, I work in little fragments of time to get it somewhere, to test out ideas with myself. But, at some point early on, I really have to sit down for a long interrupted period of time and concentrate on that story. I have to isolate myself so I can put myself into the story.

Once I've done that a few times, then I can then work on it sporadically. I read my stories over and over and over again. I always carry three or four stories with me that are in some stage of development.

TEACHINGBOOKS: When you find things aren't going right for you on a given day, or you aren't being as productive as you wish you could be, what do you do?

STUART J. MURPHY: You know, sometimes I run into blocks and sometimes I feel like a story isn't coming together the way I'd like it to. An idea isn't gelling, an idea isn't forming, or I'm in a funk about it and I'm feeling like this is just not going the way I'd like. Then I'll move away from it — put the story down and do something more routine. I'll answer e-mails and take care of lots of the other things that are part of an author's life that need to be done. I'll look at kids' letters that have come in. I'll go for a walk and look at some boats or look at some birds. And just get away from it for a while, because I don't do my best work if I don't feel good about it.

TEACHINGBOOKS: What's next for you?

STUART J. MURPHY: Well, as far as MathStart is concerned, I have more work to do, because I have math topics that I haven't covered yet, and because the more time I work on it, the more time I spend with teachers, the more time I spend with kids, the more time I spend with parents, the more ideas I get about what needs to be done and what would be helpful to do.

Books by Stuart J. Murphy

All titles published by HarperCollins Children's Books

Level 1:

- 3 Little Firefighters — Sorting (illustrated by Bernice Lum), 2003
- Beep, Beep, Vroom Vroom! — Patterns (illustrated by Chris Demarest), 2000
- Best Bug Parade, The — Comparing Sizes (illustrated by Holly Keller), 1996
- Bug Dance — Directions (illustrated by Christopher Santoro), 2002
- Circus Shapes — Recognizing Shapes (illustrated by Edward Miller), 1998
- Double the Ducks — Doubling Numbers (illustrated by Valeria Petrone), 2003
- Every Buddy Counts — Counting (illustrated by Fiona Dunbar), 1997
- Greatest Gymnast of All, The — Opposites (illustrated by Cynthia Jabar), 1998
- Henry the Fourth — Ordinals (illustrated by Scott Nash), 1999
- House for Birdie, A — Capacity (illustrated by Edward Miller), 2004
- It's About Time — Hours (illustrated by John Spiers), 2005
- Just Enough Carrots — Comparing Amounts (illustrated by Frank Remkiewicz), 1997
- Mighty Maddie — Understanding Weight (illustrated by Bernice Lum), 2004
- Missing Mittens — Odd and Even Numbers (illustrated by G. Brian Karas), 2001
- Monster Musical Chairs — Subtracting One (illustrated by Scott Nash), 2000
- One...Two...Three...Sassafras! — Number Order (illustrated by John Wallace), 2002
- Pair of Socks, A — Matching (illustrated by Lois Ehlert), 1996
- Rabbit's Pajama Party — Sequencing (illustrated by Frank Remkiewicz), 1999
- Seaweed Soup — Matching Sets (illustrated by Frank Remkiewicz), 2001

Level 2

- Animals on Board — Adding (illustrated by R.W. Alley), 1998
- Best Vacation Ever, The — Collecting Data (illustrated by Nadine Bernard Westcott), 1997
- Bigger, Better, Best! — Area (illustrated by Marsha Winborn), 2002
- Captain Invincible and the Space Shapes — Three-dimensional Shapes (illustrated by Remy Simard), 2001
- Coyotes All Around — Rounding (illustrated by Steve Bjorkman), 2003

- Elevator Magic – Subtracting (illustrated by G. Brian Karas), 1997
- Fair Bear Share, A – Regrouping (illustrated by John Speirs), 1998
- Get Up and Go! – Time Lines (illustrated by Diane Greenesid), 1996
- Give Me Half! – Understanding Halves (illustrated by G. Brian Karas), 1996
- Let's Fly a Kite – Symmetry (illustrated by Brian Floca), 2000
- More or Less – Comparing Numbers (illustrated by David Wenzel), 2005
- One Hundred Days of Cool – Numbers 1–100 (illustrated by John Bendall-Brunello), 2004
- Pepper's Journal: A Kitten's First Year – Calendars (illustrated by Marsha Winborn), 2000
- Probably Pistachio – Probability (illustrated by Marsha Winborn), 2001
- Racing Around – Perimeter (illustrated by Mike Reed), 2002
- Spunky Monkeys on Parade – Counting by 2s, 3s, and 4s (illustrated by Lynne Cravath), 1999
- Super Sand Castle Saturday – Measuring (illustrated by Julia Gorton), 1999
- Sundae Scoop, The – Combinations (illustrated by Cynthia Jabar), 2003
- Tally O'Malley – Tallying (illustrated by Cynthia Jabar), 2004

Level 3

- Betcha! – Estimating (illustrated by S.D. Schindler), 1997
- Dave's Down-to-Earth Rock Shop – Classifying (illustrated by Cat Bowman Smith), 2000
- Dinosaur Deals – Equivalent Values (illustrated by Kevin O'Malley), 2001
- Divide and Ride – Dividing (illustrated by George Ulrich), 1997
- Earth Day – Hooray! – Place Value (illustrated by Renee Andriani), 2004
- Game Time! – Time (illustrated by Cynthia Jabar), 2000
- Grizzly Gazette, The – Percentage (illustrated by Steve Bjorkman), 2003
- Jump, Kangaroo, Jump! – Fractions (illustrated by Kevin O'Malley), 1999
- Lemonade for Sale – Bar Graphs (illustrated by Tricia Tusa), 1998
- Less Than Zero – Negative Numbers (illustrated by Frank Remkiewicz), 2003
- Penny Pot, The – Counting Coins (illustrated by Lynne Cravath), 1998
- Polly's Pen Pal – Meters (illustrated by Remy Simard), 2005
- Ready, Set, Hop! – Building Equations (illustrated by Jon Buller), 1996
- Room for Ripley – Capacity (illustrated by Sylvie Wickstrom), 1999
- Safari Park – Finding Unknowns (illustrated by Steve Bjorkman), 2002
- Shark Swimathon – Subtracting Two-Digit Numbers (illustrated by Lynne Cravath), 2001
- Sluggers' Car Wash – Dollars and Cents (illustrated Barney Satzberg), 2002
- Too Many Kangaroo Things To Do! – Multiplying (illustrated by Kevin O'Malley), 1996
- Treasure Map – Mapping (illustrated by Tricia Tusa), 2004

Published Articles of Interest by Stuart J. Murphy

- "Mighty Math Skills: Mathematical thinking in preschool and kindergarten can go far with the help of everyday activities and good books," *Teaching PreK-8*, May 2003, pp. 64–65.
- "Teaching Math, Reaching Kids: Using storybooks to motivate children who are having difficulty with mathematics," *Teaching PreK-8*, January 2000, pp 50–52.
- "Learning Math Through Stories," *School Library Journal*, March 1999, pp 122–123.

- “Turning Kids on to Math: Classroom strategies for making mathematics enjoyable for young students,” *Teaching PreK-8*, January 1999, pp 62–63.

Note: Bibliographies created in 2003.

This In-depth Written Interview was created by TeachingBooks.net for educational purposes and may be copied and distributed solely for these purposes for no charge as long as the copyright information remains on all copies.

Questions regarding this program should be directed to info@teachingbooks.net

Copyright ©2003 TeachingBooks.net LLC. All rights reserved.