



Everybody Counts!

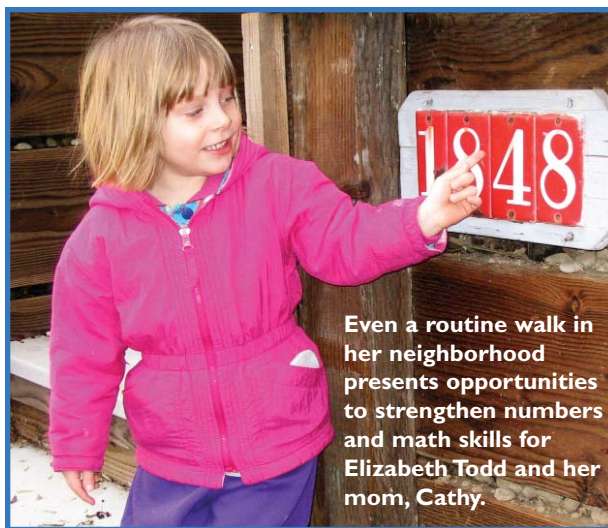
Elizabeth Todd and her mother walk through their neighborhood almost every day. At almost 4 years old, Elizabeth loves to look for special things along the way: the carved figure of an Indian on a nearby roof, purple flowers in a particular garden, a bench tucked under the trees, a bright yellow antique car parked in a driveway. But most of all, Elizabeth loves to look for numbers. She finds them on mailboxes, fences, garage doors, license plates and street signs. There is no limit to the number of places to find numbers, and no limit to the pleasure Elizabeth gets from finding and naming them. Her mother, Cathy Sharp, has been nurturing Elizabeth's number nature for a long time.

"When we find them, we read them and talk about them," says Cathy. Elizabeth doesn't need any prompting. She is pointing and reading the house numbers posted on a wooden retaining wall outside a neighbor's home. "One-eight-four-eight," she says with obvious satisfaction.

Elizabeth does more than just read numbers. She and her mother count all kinds of things, including their steps. Sometimes, it's just "One, two, three, four, five ..." as they walk along. Other times, they play a game. "One," says Cathy. "Two," says Elizabeth. "Three," says Cathy. "Four," replies Elizabeth. And so forth. A little later, they may reverse roles. Elizabeth can usually count to 20 without a problem, but when Cathy stops by a mailbox bearing the number 12 and asks her daughter to name the number, the girl says, "One-two."

"And what do we call it if it's written 'one-two'?"

"One-two," says Elizabeth. Cathy tells her it's also called "twelve." Then she asks, "What's bigger than 12?" To her mother's surprise, Elizabeth points to another 12, in larger numerals, on the side of the house! Her mother laughs. "Now *that's* confusing," she admits. But, because Elizabeth has a strong foundation in basic counting and because she encounters numbers daily in an enjoyable



Even a routine walk in her neighborhood presents opportunities to strengthen numbers and math skills for Elizabeth Todd and her mom, Cathy.

way, Cathy knows that her daughter will soon be reading two-digit numbers and understanding concepts like "bigger than."

Variations on simple counting games abound and parents can adapt them to their child's level. "What number comes after (or before) this one?" ... "What number is two more than this?" ... Looking at a three-digit number – 268, for example – you can play with place value: "If we changed this 6 to a 7, what would the number be called? What if we put a 1 in front of this 268?" (To make it more visual, carry number cards.) Even multiplication (and division) can come into play: "What's twice (or half) as much as this 12?"

Like reading, appreciating the joys of numbers should start at a very early age. Charles Richards and his mom count his feet and hands when it's boots and

mitten time. "We count fingers and toes when it's fingernail and toenail clipping time," says the two-year-old's mother.

Counting goes in two directions for Charles. "We count down with the microwave oven as it finishes heating the bottle: 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, BEEEEPP! Charles always looks forward to the beep part."

When Charles' older brother was 18 months and in the hospital recuperating from surgery, his parents discovered a way to keep him happily occupied.

"We rode in the elevators counting up and down along with the flashing numbers. It occupied *hours*," his mother recalls.

The simple act of naming numbers can occupy many pleasurable hours in a young child's life. Children introduced to number concepts in this way will probably be eager to take on more advanced math challenges as they grow. Parents need

merely to ensure that, in their family, everybody counts.

Math Moments™ creator David Schwartz spends much of his time finding unusual, whimsical ways to make math and science come alive for kids and teachers, both through writing and through speaking at schools and conferences. He has written nearly 50 books for kids, including *How Much Is a Million?* and the "Look Once, Look Again" series. For more information about David's math and science adventures, check out his Web site, www.david-schwartz.com.

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