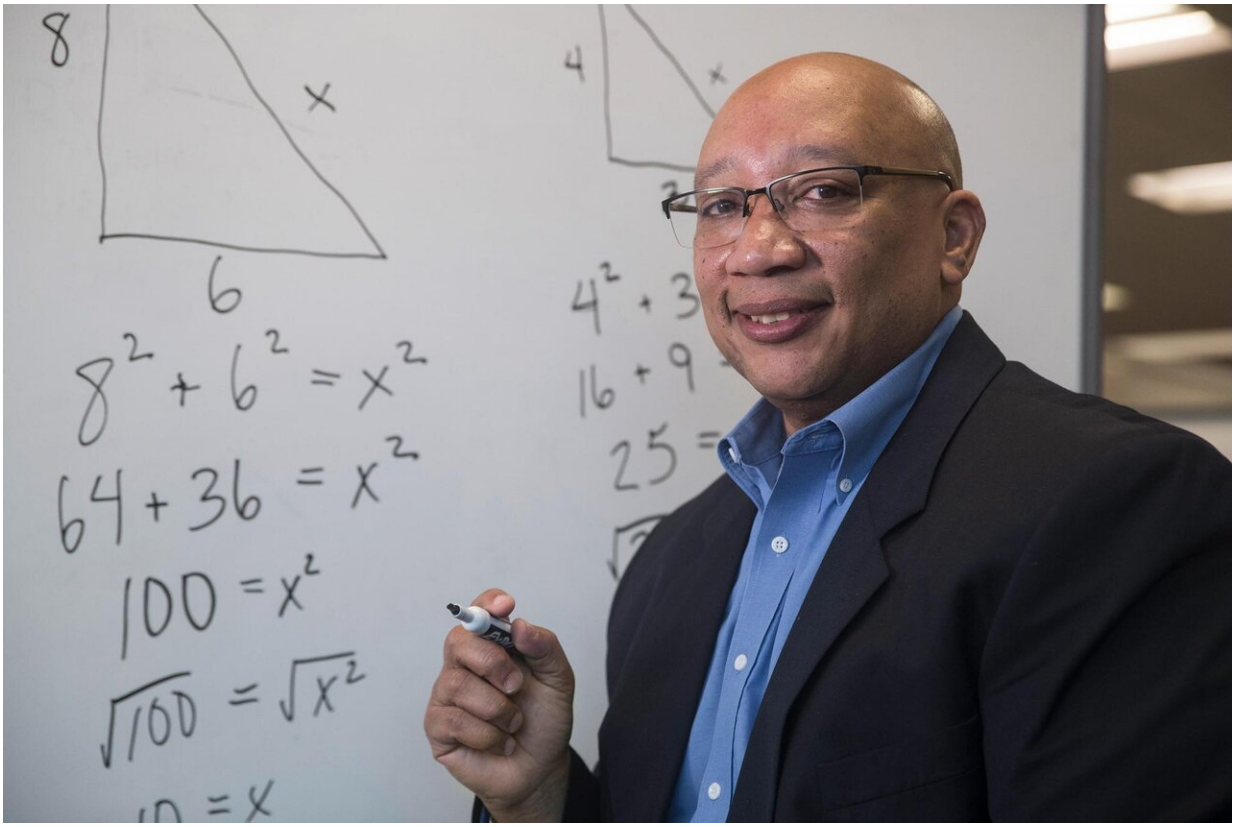
5 tips to get your children excited about math

January 17 2020, by Whitelaw Reid



Robert Berry says patience is a must when it comes to teaching children math. Credit: Dan Addison, UVA Communications

What are parents to do when their children don't show much interest or become easily frustrated by math?

In the second of a two-part series, Robert Berry—the University of

Virginia's Samuel Braley Gray Professor of Education—answers the question. [Read the first part here.]

"I would advise caregivers to talk about mathematics with their children ," said Berry, of UVA's Curry School of Education and Human Development. "These conversations can be about things they notice in their environments and about the mathematics that is happening in schools."

While engaged in the conversations, Berry suggests caregivers keep these five things in mind:

- Ask, then listen. "Let your children drive the conversation," Berry said. "When my children were younger, I would often ask them what they noticed about something in our surroundings. Sometimes these notices would be patterns of tiles, geometric configurations of materials, relationships between size and costs, and other things to get the conversations jump-started. Over time, my children would ask me about my notices and began to drive the conversation."
- Let them show what they know. "Let your children use their ideas to explain their thinking. Allow children to use words, pictures, diagrams and numbers for their explanations. Feel free to follow up with questions and comments that allow children to show and explain their ideas."
- Be open to new ideas. "Your children's strategy and thinking may be different from your own. Too often, for many children, they are turned off because their thinking is positioned as being deficient because it is different. It is essential to have access to children's thinking, rather than focusing on rightness or wrongness ideas. Even if a child gives a wrong answer or their thinking is not fully developed, it is essential to know how their thinking and strategies lead to their answer. Focusing on

children's thinking and allowing them to explain their reasoning creates opportunities to build connections."

- Be patient. "It is important to be patient with children. Explaining one's thinking takes time, and for children, giving them time and space is a way of honoring their ideas. The need for efficiency should come from children, but too often, efficiency is pressed on children. We see the press for efficiency when children are asked to memorize mathematical ideas before having a strong understanding of mathematical concepts. A classic example is a press to memorize numbers facts before having a strong understanding of numbers."
- Learn something new. "When caregivers are frustrated with 'new' and unfamiliar approaches to doing mathematics, they usually have not had a chance to learn these approaches themselves. I recommend that caregivers take time to learn these approaches."

Of course, there are plenty of kids who really enjoy math, too.

What should a parent of, say, a kindergartner—one who is showing a remarkable aptitude—do to help grow his or her math skills beyond what the student may be learning in school?

"When considering opportunities for acceleration in mathematics, care must be taken to ensure that opportunities are available to each and every prepared student, and that no critical concepts are rushed or skipped; that students have multiple opportunities to investigate topics of interest in depth," Berry said. "Too often, students skip essential mathematics content and concepts, which can have negative implications later on in their schooling.

"A classic example is when students are rushed or skip proportional reasoning in upper elementary and middle grades; this has implications for success in upper-level mathematics.

"Students with exceptional mathematical promise must be provided with differentiated instruction in an engaging mathematics learning environment that ignites and enhances their mathematical passions and challenges them to make continuing progress. They must have a variety of opportunities inside and outside of school to develop and expand their mathematical talents, creativity and passions. These experiences may include formal courses, extracurricular experiences such as math clubs, circles, competitions and mentoring."

Provided by University of Virginia