

Numb3rs and Numbers

by Nancy Knowlton

I have to admit that I am a serious *Numb3rs* fan, and I catch the show whenever I can. Solving a crime is always interesting, but it's the use of mathematics in ways I often would never imagine that keeps me coming back (and even watching reruns).

Algebra and geometry were favorite subjects of mine in elementary and high school. My teachers made these subjects come alive for me and my classmates. I loved to do every problem in my textbooks until I deeply understood concepts, often completing them before the teacher covered the topic in class. These dedicated teachers made mathematics real, bringing in real-life examples and problems to help us understand concepts and the reason for learning them.



Must-Have Skills

Today mathematical literacy isn't a nice-to-have – it is a must-have. Math is all around us in our everyday lives, and it will be more so in the future. Basic existence demands a level of mathematical competence like never before. It's not just for those students who plan to pursue post-secondary studies in mathematics – it's a necessity for all of us in our everyday lives as well.

Math Masters

Beyond the basics, many of the problems facing the world are going to be solved, in whole or in part, through the application of mathematical principles. Life will get better because of math and the products that its application can provide. To get those math masters in the future, we need to graduate large numbers of students with an interest and competence in mathematics who will pursue high levels of education in the subject.

Just how do we turn our young people on to such a critical subject – whether it is for everyday use or to serve them through a higher level of education?

Engaging Students in Math

Children do their best when they are engaged and enjoying learning activities. Making sure that meaningful learning experiences hold students' attention has to be a top priority.

We also know that likes and dislikes start early. Teachers and parents can play a role by focusing on challenging and interactive math activities early on. Educationally relevant games can help to build a love of problem solving

early on in both boys and girls. We don't have to accept and perpetuate a gender difference.

Specialist Teachers

Every student deserves a fully qualified math teacher, particularly in the upper years when the concepts are deeper and can be harder to comprehend. This means two things.

First, math specialists today likely are going to have to teach more students than those in their local classroom. They will need to reach out to students in classrooms in their cities and across their district, perhaps state, province or country. Skills that have been honed for in-person teaching and support will have to be stretched and morphed to allow them to reach and teach students whom they may never meet.

Second, the teaching profession will have to attract math specialists in growing numbers, first to replace teachers who will soon retire and then to build the teaching force to meet accelerating needs.

Math Technology Teaching Aids

At SMART, we're doing our part by focusing on math functionality within our products and resources. Our products are jammed full of tools and functions that support math teaching and learning. Tools that used to reside only in the physical world, such as a compass and protractor, are now available from within our Notebook collaborative learning software.

SMART Notebook Math, a specialized version, comes complete with dynamic graphing tools that enable educators to create their own graphs or graph mathematical functions or tables of values. The application features a handwriting recognition function that recognizes individual math symbols and full equations, and can then solve equations. It is also easy to launch any TI calculator emulator from SMART Notebook Math.

Love and Fluency

A broad-based love of and fluency with numbers is what we truly need from education today. Building skill in all students and encouraging a good portion of students to choose careers in this area must be top priorities.

Nancy Knowlton is the co-founder and CEO of SMART Technologies, the world's leading supplier of interactive whiteboards. Nancy's husband and SMART co-founder, David Martin, is the inventor of the interactive whiteboard product category. Together they have built a company that is focused on delivering easy-to-use, yet feature-rich collaboration tools, including the SMART Board interactive whiteboard. Nancy can be reached at CEO@smarttech.com.