“Technology in the schools is a good thing in our day and age, and any exposure we can give students is great. But they still need to learn to do the basics themselves.”

Ryan Sutherland

Ryan is a 37-year-old math teacher at Sommersville Middle School, a public school in an upper middle class district in Fairfax, Virginia. He has taught several levels of mathematics in the past, but most recently he’s been assigned to teach Algebra 1 to gifted eighth graders. He’s a talented teacher who takes his profession seriously. He’s won many teaching awards and attends professional conferences every year. Ryan is a technology enthusiast; he owns many of the newest gadgets including a cell phone / pda combo, a pocket-sized digital camera, a portable MP3 player, and two home computer systems. He’s also a motorcycle hobbyist; he owns his own machine that he maintains himself. He’s even constructed a small machine shop in his garage to build and modify parts.

When it comes to teaching, Ryan likes to have the opportunity to bring technology into the classroom. He believes that computers and digital devices will play a significant part in the lives of his young students, and he wants to help prepare them for that life by showing them what technology can do for them. That said, he also firmly believes that technology should not be used as a crutch to make up for a poor understanding of mathematics. Thus he requires his students to work problems out on paper, using the graphing calculators only to check their answers to ensure they didn’t make any errors in the execution. He also appreciates the ability of the graphing calculators to quickly visualize the problems and solutions the students are facing. For many exercises, he requires students to use the graphing calculator to generate a visualization and use it to help them better understand the problem. Ryan also uses this capability during lessons; he owns an overhead projector that he can hook up to his calculator to show students graphs as he goes over problems in class. He also uses this tool to help teach the students how to perform operations on the calculator; he walks them through graphing operations so that they will understand how to use the tool in their homework.

Although Ryan is a technology enthusiast, he doesn’t particularly enjoy playing around with graphing calculators for fun. He first learned how to use them through a short day-long training session given by Texas Instruments at a conference he attended. This was helpful to familiarize him with the basic operations, but he has continued to learn more about the calculators through comparing notes with fellow math teachers at his school as well as with students. In fact, some of his more enthusiastic students know more about the calculators than he does; a few have even taught themselves how to write simple programs on the calculators. Ryan supports this active learning and is thrilled that his students are adopting technology so readily.