

# Encouragement and Enthusiasm



## In the Stott household, we love math.

Well, maybe not *everyone* in my household loves it equally, but since they were in kindergarten, whenever one of my children asked me for help with math homework, my reply has been an instant and cheerful “We love math!”

In fact, that ritual has occurred so often that the mantra of “we love math” has become ingrained. Ask any of my four kids what the family motto is, and they know the drill. They’ll respond with “We love math,” even if they do roll their eyes when they say it. The point is, my wife and I have tried to encourage in our children an enthusiasm for learning—not just for math, but also for science, foreign languages, music, literature and a wide variety of other subjects. Without that encouragement, the Stott family motto could easily have been “We love ice cream”—trust me on this one—but instead, it’s “We love math.”

So I was delighted when my eighth grade daughter, Emily, invited me to go with her to a STEM (science, technology, engineering and mathematics) event sponsored by our county’s regional office of education. The event was set up specifically for girls and their parents, and it was designed to encourage young women to pursue studies and careers in technical fields.



Emily Stott closing the circuit on her “Bristle Bot.”

Since, you know — we love math — we just had to go.

It was a prestigious honor for my daughter. A maximum of three kids from each school were invited, and it took place at Argonne National Laboratory near Lemont, IL. More importantly, it was a great opportunity for her to hear from a number of women working in STEM fields about what they do on a day-to-day basis and how they got there.

The keynote speaker was Jillian Arnold, a cinematographer and work flow specialist. You might not think that cinematography has much to do with STEM careers, but that’s before you learn that Arnold shoots video for NASA’s Jet Propulsion Laboratory and that a “workflow specialist” is someone who handles and processes digital media between the time it’s shot in production to the time it’s edited in studio.

Her job involves computers, software and technical equipment, and she has to understand the technology of that equipment as well as the physics of lighting. Her talk was not only inspirational, but also put a face and a personality with the technology.

The event also included break-out sessions where the students were able to do some hands-on projects, such as building a table out of newspaper and masking tape, and constructing a miniature robot. They also heard from a panel of speakers including a computer simulation specialist from Argonne National Laboratory, a mechanical engineer specializing in nuclear power plants and a zookeeper from Brookfield Zoo.

For me, the most important part about this event was connecting the dots. Kids go to school, and they study math and science because they have to, but nobody explains how these often abstract concepts will ever relate to their real life. When will they ever have to solve for  $X$  or prove that two corresponding angles are equal? Shooting videos of rocket launches is a lot more interesting to kids than doing math problems. So is being a zookeeper. So is working in a nuclear power plant or programming one of the world’s most powerful supercomputers. There are a wide variety of STEM-related careers, but if kids aren’t exposed to them, they’ll never connect the dots, and they’ll see their schoolwork as drudgery.

If you’re reading this, you probably work in a STEM-related field—maybe even one of the really cool and interesting ones. You probably also know some young people who haven’t yet decided what they want to be when they grow up. I challenge you to share your enthusiasm and help them see the possibilities.

Maybe they’ll learn to love math, too.