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Margaux accepts the 2008 "Future Prospect Award" for her service with the Salvation Army.

#### 02.09

## **Geek Girl**

#### BY MARGAUX HUTCHINS

My name is Margaux Hutchins. I just turned nine years old this August. My dad is an engineer and he has his own engineering business.

I am a *geek girl*. A geek is somebody who is good at math and science. A geek is somebody who is smart. A geek likes to find out new things and figure out how they work. A geek likes to write.

Since I was five years old, I started doing math at home. My dad taught me long

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multiplication, long division, the number line, adding fractions, subtracting fractions, multiplying fractions, dividing fractions, improper fractions, reducing fractions, decimals, percentage, and exponents. I would have to say that I like doing fractions the most. Because I do math at home, I'm now three or four years ahead in math. I like to challenge myself.

I like computer games and electronics because pushing buttons and figuring out what is going on is a lot of fun. Also, I like science because it is fun to see how things work.

I've been going to a Montessori school since I was four years old. When I'm in school, I check the board every morning when I get into the classroom to see if I have lessons. I love to write in my journal. I just love working on my calligraphy, illuminations, and math. Everyday we all have to do math. This is called 'daily math.'

I have a lot of hobbies. I really enjoy going to Taekwondo. I've been going Taekwondo for two years now. I would like to get my black belt. I have practice every Monday and Wednesday evening. On Fridays, I do sparring. I'm going to a tournament next month, so I'm also practicing on Saturday mornings until the tournament. I've been in two smaller tournaments last year. I had a lot of fun doing it. I've won gold and bronze metals.

I can say that I like technology because I learned to use a computer at the age of three years old. I do have a lap top computer that I share with my mom. I can only go on certain Web sites that are approved by my parents. I have an Ipod that my parents down load songs for me. I use it when we are on long road trips or when I just want to relax.

It's Christmas time. Last year, I had my own Christmas tree because I have so much ornaments that I've collected. My family loves Christmas. I get to go see The Nut Cracker. We also volunteer to ring the bells for the Salvation Army for a month or more during Christmas time. My family believes in giving back to our community.

I guess that I can be a girly girl some times because my mom allows me to be in the Nordstrom's fashion show twice a year. They have a show in the spring and one in the fall. I also like the American Girl Dolls. I got to go to their store in New York City and had brunch with my mom in their café. That was so cool.

When I was three years old, my dad taught me the expression called 'no free lunch,' which means nothing in life is free. I work very hard in all the things I do.

The best thing of all, I love to make my friends and family laugh! I am very lucky to have the life I have and be a Geek Girl.

**Mom and Dad's comments:** We have one daughter – Margaux. There are few role models for young girls in science and technology. Most popular younger role models are Hannah Montana and similar manufactured brands. As a girl gets a few years older, the role models change to Britney, Paris, and similar brands. Popular culture matures young girls very quickly away from science, technology,

engineering, and math.

Here are some of our lessons learned:

Since Margaux was at an early age, we've tried to reframe *geekdom* as a virtue, and something for our daughter to emulate. Why? It is fun. It is different. It is cool.

How did we do this? We want Margaux to be well-rounded. So, we looked at math and science reasoning as critical to the development of a well-rounded person. We encouraged our daughter to ask questions, solve problems, work on puzzles, and have fun at math.

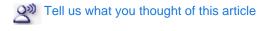
My wife and I believe that Margaux's competition is not U.S. kids, but kids in countries like China and India. That's one of the reasons why we have encouraged the 'no free lunch' mantra.

The critical question is: Will Margaux still like math and science when she's a teenager? We hope so. We do know that it takes continuous reinforcement to make math fun and interesting.

Women engineers remain underrepresented in the engineering profession, accounting for less than 10 percent of the current engineering workforce. And just 20 percent of today's undergraduate engineering students are women. If you have a daughter (or son) who is interested in math and science, and possibly a career in engineering, following are just a few of the online resources that are designed to capture the imagination of children, and encourage them to at least consider a career in the profession:

- TryEngineering.org An engineering and engineering careers resource from IEEE, IBM and TryScience for students (ages 8-18), their parents, their teachers and their school counselors.
- EWeek Introduce a Girl to Engineering Introduce a Girl to Engineering Day is scheduled for 19 February. Girls discover their potential as engineers and learn how they can play a role in addressing the next generation's most pressing issues.
- Engineer Your Life Dream big. Love what you do. A guide to engineering for high school girls.
- DiscoverEngineering.org A fun Web site developed specifically for middle school students to learn more about engineering, technology, math, and science
- EWeek.org EWeek 2009 is 15-21 February. The Web site provides a host of educational resources for children and adults.







Margaux Hutchins is a proud geek girl, and our youngest contributor yet. We wish he well in all of her endeavors, and what promises to be an exciting and fulfilling life. We hope she keeps us posted on her progress. Her father, Greg Hutchins, is a member of IEEE-USA's Career and Workforce Policy Committee.

Comments may be submitted to todaysengineer@ieee.org.

Opinions expressed are the author's.

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