Title: SECME: Going Out On a STEM!

Student Name: Benjamin Shapiro

Grade: 3

School Name: Heathrow Elementary School

District: Seminole County

Teacher's Name: Mrs. Wall-Townsend

INTRODUCTION

I wake up thinking about designing new rollercoasters and go to sleep thinking about rollercoasters. I have been told I talk about rollercoasters all day long too. Rollercoasters excite me because I have been on some really scary rollercoasters. My dream is to make ones that are scarier and faster. Rollercoasters that have loops interest me the most, which is why I want to make a rollercoaster with lots of loops. Rollercoasters thrill and excite me, and I hope that if I get the opportunity to design rollercoasters, my rollercoasters will make people feel the same way.

Phase 1

I am so excited to write this essay about SECME: Going Out On A STEM because I love learning about Science, Technology, Engineering and Math. In Phase 1, I was asked questions about my passions in science, and after thinking about it, what I like best is the technology. I like how technology keeps growing and changing. For instance, before we had refrigerators that you press a button to get cold water, people had to walk to lakes and get water using a bucket.

For the next part of my Phase 1 research, I asked my friends, family members and teachers what I enjoy most. They mostly said that I like drawing mazes, doing hard math, designing my own puzzles, and that I love riding rollercoasters. I was surprised that they all knew what I liked most; it is like they took the words right out of my mouth!

The first part of my internet research was finding out what I needed to do to become a rollercoaster designer. I looked at the website www.education-portal.com and found out that to be a rollercoaster designer, you need a strong grasp in engineering. Rollercoaster designers have a background in mechanical, structural or civil engineering. Did you know that rollercoaster

designers have to do a lot of work? Not only do they design the rollercoasters, they have to make their rides safe too!

Next, I went to www.onetonline.org and researched mathematicians because I enjoy math. I learned that mathematicians don't only do math problems, they also use math in science. Some of the job titles a mathematician can have are Computational Scientist, Cryptographer, and an Image Scientist. All of these jobs require a good math understanding.

I also did research on Civil Engineering at the website www.texascaresonline.com. I learned that Civil Engineers plan and design buildings. I also learned that if I want to be a Civil Engineer, I need to have a bachelor's degree. To keep up with technology a civil engineer has to have continuing education.

Phase 2

For Phase 2 I visited the SECME Website and saw the seven corporations that are major SECME sponsors. I found the NASA website most interesting because I loved looking at all the rocket pictures, and I learned a lot of space facts! I learned that NASA is creating the technologies to enable human and robotic exploration in space. When I turn eleven, I want to go to NASA's space camp. I want to go to space camp because I want to learn more about space and all the cool stuff about rockets. I hope learning about rockets will help me make better rollercoasters. I want to thank the seven companies that sponsor SECME. I have enjoyed my weekly SECME meetings learning about math and science. Without the sponsors, there wouldn't be any SECME.

For the next part of Phase 2, I visited some of the suggested websites that told me about different careers in Science, Technology, Engineering, and Math. I thought the most interesting site was www.stem-works.com because it talked about robotics, video games and other STEM subjects.

Since I know I want to have a career designing rollercoasters, I looked up rollercoaster companies. First, I visited www.bolliger-mabillard.com. I know this is a company I want to work for. Bolliger & Mabillard is committed to providing custom-designed rollercoasters. They provide complete customer satisfaction by providing quality products and services. I saw on their website that they even built some of my favorite rollercoasters, Manta at Sea World, Sheikra at Busch Gardens and The Hulk at Islands of Adventure.

I learned about another rollercoaster design company named Intamin Amusement Rides International. I visited Intamin's website http://www.intaminworldwide.com. Intamin is known for their rides that are innovative and record breaking. They have engineering and rollercoaster design capabilities. They have designed rollercoasters for thirty different countries. Intamin has designed one of my favorite rides named Cheetah Hunt at Busch Gardens. I learned that Intamin has six offices around the world. , If I work at Intamin, I will work in the Maryland office.

Phase 3

For Phase 3 I explored different universities that have engineering programs. First, I visited www.ucf.edu since it is the SECME University closest to where I live. One thing I liked about UCF is that it is close to both NASA and the Orlando Theme Parks, which are two of my favorite places. I could work at a theme park while getting my engineering degree.

One of the SECME Universities that is farthest away from where I live is University of Iowa. Even though it is far away, I have visited Iowa once. Since this university was one of the

furthest away, I looked at their website, www.uiowa.edu. What I liked best about the University of Iowa was that the university has a program called the Center for Computer-Aided Design. I would be interested in going to the University of Iowa to learn how the Center for Computer-Aided Design could help me build rollercoasters.

Next I visited the Georgia Tech website, www.gatech.edu since my Uncle Ryan got his Master's Degree in Civil Engineering there. I liked how this website describes the different types of engineering programs the school offers. I learned a lot about the different types of engineering programs. I was excited to see that Georgia Tech offers science and math summer programs for kids. I liked visiting all the university websites I looked at, and if I had to pick one that I could see myself attending, it would be a hard choice.

Conclusion

I have learned a lot writing this essay. For example, I learned that it is hard work to become an engineer. I will continue looking for ways to challenge myself in math and science. At the end of my essay journey, I've concluded that I'm more excited than ever to be a roller coaster designer. I am looking forward to studying and working on a subject I love.

Works Cited

Colley, Benjamin. Personal interview. 1 Nov. 2013.

Halkides. Personal interview. 5 Nov. 2013.

Okun, Maddi. Telephone interview. 1 Nov. 2013.

Paolantonio, Teresa. Telephone interview. 2 Nov. 2013.

Shapiro, Jessica. Personal interview. 1 Nov. 2013.

Shapiro, Shawn. Personal interview. 31 Oct. 2013.

www.bolliger-mabillard.com

www.education-portal.com

www.gatech.edu

www.intaminworldwide.com

www.onetonline.org

www.stem-works.com

www.texascaresonline.com

www.ucf.edu

www.uiowa.edu