

SECME: Going Out On a STEM

Lilia Requena

Grade 11

East Early College High School

Houston Independent School District

Samuel Saenz

Every person in this world is born with a special gift that makes him or her unique and distinguished from any other person. I believe that every person beholds a skill within that is to be developed and makes them who they are. In order to seek a positive outcome, from our skill, we need to develop it and be aware of the related choices we make. Whether we have the gift of mastering the skill of Physics or the art of Mathematics, every step is required to build it properly. That is why to Go Out On a STEM— every step is required.

In a world full of technology and advances we are able to enjoy our daily lives and discover our true passions. Throughout this course of research I discovered a treasure chest, where in I rediscovered my own personality, one that I did not invest in before, and a career door of opportunity provided by Going Out On a STEM. In the first phase of discovery, I analyzed my personality and found out that I am passionate about the world of science and math. In other words, I would describe myself as someone who is self-determined and works until the goal set on my mind is accomplished. Moreover, when interviewing my relatives and closest friends, they gave me good feedback; they said that I was dedicated to my education and that I reflected delight about tutoring others who needed help. One of the answers that inspired me the most was my mom's, "I admire you because of the hard work you put into your school work, staying up late every day... I am proud of you." From this I learned that I have to keep on **Going**.

The second phase of this research helped me to narrow down my career choices and gave me a view of the wonderful agencies and industries that make up this world of STEM. Before doing this research, I had so many possibilities for a career choice, but

now I have narrowed it down to only a few options. The first option I have in mind is majoring in the career of marketing management, in which one has to research, negotiate contracts and apply statistics. The career I am most passionate about, though, is chemical engineering, in which math, physics, and economics play an important role. In this field a chemical engineer constructs facilities and tools that help everyday people; I am most interested in this career because it involves creation for innovation. From NASA to Exxon Mobil, these agencies and industries that sponsor SECME create in order to innovate our society. They are helping our generation and future generations to live in a world powered by useful tools and are progressive in innovative ways to be energy sufficient. NASA, one of the greatest agencies creates and improves tools designed to explore outer space and results in innovative ways to find new galaxies in the universe. Exxon Mobil creation of the “Kearl oil sands project” is an innovation to increase oil production and to be energy efficient. All together, the sponsors of SECME help develop future generations that will discover new means of energy and even will innovate ways to start a human colony on the moon. After this I realized that I have to Go **Out** in the world and make the best of myself, by collaborating in the STEM field.

Furthermore, in the third phase of my journey I was able to explore the endless possibilities that the universities around this country provide my. Certainly, searching for the right university was not easy, but it was a learning experience about getting to know the characteristics and requirements to meet their standards. This helped me narrow my options to three possible universities: Texas A&M, Rice University, and University of Houston. One of my choices was the University of Houston because it listed the major of chemical and biomolecular engineering; in addition I liked it because it was fairly close to

my house, which would help avoid paying for a dorm. My next option was Rice University because it focused majorly on the disciplines of sciences and math, making it a great avenue of the STEM principles; as well, it provides the major of chemical and biomolecular engineering. The third choice I had in mind was Texas A&M, in which the major of marketing was provided by the Mays Business School. Also, this university provided the major of chemical and biomolecular engineering in the Dwight Look College of Engineering. Considering this information, I came to the conclusion that Texas A&M represented my best choice. Texas A&M will help me persevere in the area of science and math or marketing with the wonderful programs and extracurricular activities that it provides. Additionally, Texas A&M will help me Go Out **On a** new life and city that will help me experience independence and responsibility for a better future.

Indeed, SECME is an opportunity for one to learn his or her ability and strengths in the field of STEM. SECME is a threshold that can lead us to a better future, providing experience from problem-solving, and from working as a team, building in a competitive setting toward a more promising future. SECME has helped me to discover and develop abilities and my interests in the area of math, science, and engineering. As well, it has helped me to be competitive and self-determined, and to win, by being inspired by my competition from fellow scholars. Being in this competition for three years has given me new capacities that have helped me in my education and will no doubt also play a part in my own acceptance into the college of my dreams. SECME has provided me with the gift of being able to work on a team and to take a role of a leader; it has even helped me to be more open about my ideas and opinions. From this experience, I have had fun building a balsa wood bridge, an egg drop container, a jet car, and even by writing about myself and

expressing my opinions about my future. Certainly, building the egg drop container has been one of the most amusing projects, because it is a that requires were you have to think about the lightest materials and most sophisticated designs to protect the egg from braking. Likewise, my team members and I had to sketch our ideas in order to build the balsa bridge, so that it would be light, yet sturdy. In this particular competition, I was able to incorporate geometric designs, such as triangles, by making patterns that would make the bridge resistant to collapsing and efficient enough to sustain the weight applied. As well, I enjoyed working on then jet car, in which my team and I were able to build and modify the body of the car by making its structure lighter. Undeniably, these three years in SECME have taught me principles of leadership and team sportsmanship that will help me in other competitions and events as well. Also, it has helped me to improve the designs of the projects. Overall, SECME has served as an experience of building, things that I didn't imagine doing before entering high school, and has helped me take a step to **Go Out On a STEM.**

In conclusion, this project has served as a learning experience to discover my personality and to set new goals in my life to continue a life and career of STEM. This is a wonderful tool that I used to discover my interests and my passions; as well I became aware of the path I have gone throughout the years of participating in SECME. Throughout this research I have discovered the helpful agencies and industries that will assist me in my pursuit of a career in math, science, and the field of Chemical Engineering. Now I am clear that Texas A&M is my first choice for the university of my dreams, because it has a great engineering program. But the most I take from this project is the persuasion and competence to take a step further to **Go Out On a STEM.**

