

### **Our InvenTeam Journey and How It Has Affected Me**

When I first signed up to take Engineering and Design, I wasn't sure what to expect. It sounded like it would be fun and interesting, but this was my first class in the Endeavour Academy so I didn't really know what it would be like. Through one semester at the Endeavour Academy it has been a very rewarding experience and I am glad that I joined. We learned a lot in the first semester and we have done a wide variety of activities. The most exciting experience was applying for and receiving a grant from MIT to fund an invention but we also researched water quality, learned about team organization, project planning and management, the invention process and we even learned about operating microcontrollers. I have benefited from these experiences in many ways such as the knowledge gained about all those topics, school recognition and also there is a great sense of pride in knowing that our team was one of only ten organizations nationwide to receive the honor of the grant from MIT. I expect further benefits to come in the future such as a trip to MIT as well as college recognition. Personally I have learned a lot about team work and responsibility.

Like I mentioned earlier we studied many different topics in the first semester. The first thing we studied was team organization as we organized our InvenTeam. We learned how important it is to organize and assign jobs to break up the work, if you don't do this it's just a mess and nothing gets done at all. We also learned about the process that goes into making an invention. It starts with a problem statement, then brainstorming, then breaking the problem down into parts and testing and experimenting with each part then bringing everything together to make an invention and finally testing

the invention and fixing problems on it. Another major topic was researching water-quality issues and researching other topics relating to our invention. Through this we gained knowledge on everything from GPS to what kind of pollutants are in water and many other things. The last major thing we learned about was microcontrollers, which can be used to do a large number of varied tasks, and we learned how to program and operate them. Overall, we learned a lot about a wide number of topics during the first semester.

In addition to studying different things, our class has also accomplished many things. The first and most important thing was applying for the grant from MIT. We all put a lot of hard work into putting out a grant proposal that well thought and well written. I was very excited when I learned that we received the grant and I was a little surprised because we were one of only ten schools nationwide and the only one in California to receive this honor. I am very proud of our team that we even received the grant and I am motivated to make our invention be successful. This was our biggest accomplishment, but not our only one. Completing the course on microcontrollers was quite an accomplish because of the time and effort that went into it. Presenting in front of the school board was another good accomplishment because I know how hard it must have been to present our ideas in front of the entire school board (though I didn't personally do it). A major event that occurred was when we went on a field trip to Applied Technologies because we learned a lot and had fun and I think that that trip motivated to want to succeed with our invention as well as just learn about science and what it can do.

From all these experiences and accomplished I have benefited a great amount. The first way I benefited was the knowledge gained on a wide variety of subjects ranging

from water-quality to microcontrollers. Another way I benefited was recognition from other classmates around school but also teachers and parents interested in our project. I have gained a strong sense of pride in our team for getting the grant and hopefully making a great invention. Also I think I will benefit from the trip to MIT as well as making my college application stronger. However I think the most important benefit I have received was learning about team responsibility. This is the first time I have really experienced having an entire team rely on me, so I have to be responsible and get my job down, otherwise I will be letting the team down. I also learned that working with a group or team to accomplish a similar goal can be very beneficial, you have to learn to set your differences aside and sometimes that can be difficulties but what a team can accomplish is far greater than individual achievement. Some of us have probably had this experience playing sports but this being an intellectual experience, it is much different and tougher but more rewarding.

In the future, I think that my experiences in Endeavour will help me greatly. I plan to probably major in Engineering in college so what I learned in this class should be very helpful in preparing me for that. I think that especially going through the invention process will help me greatly with my further studies because of the basic understanding I have about how new inventions are conceived and made. Also the lessons learned about teamwork that I mentioned earlier will also be of great value to me in college as well as my future career no matter what field I go into, engineering or otherwise.

I plan to capitalize on my participation in this class in many ways. The first major way is by attending a University next year where I will use many of the skills I learned in this class, especially if I do engineering, but even if I choose to do something else. I know

that a lot of the stuff I learned I will be able to use in everyday life, some of it I will probably never use again, but that's okay. I think that this class will greatly contribute to lifelong interest in science and mathematics.

This semester in Engineering and Design has been very beneficial to me in a number of ways. Hopefully all the things that we studied will be helpful to me in some way. I have benefited greatly from this class and will benefit even more in the future. I wasn't sure what to expect from this class, but after one semester it has been one of the most interesting and rewarding experiences I have done. I can't wait to see what excitement the next semester will bring.