

Final Essay

This was my second year with the Endeavour program and it was still an interesting, fun class. This was very similar to the Intro to Engineering class but we took the concepts we learned in the first class and expanded on them. This class is very beneficial because we learn by using our hands. We actually get to apply the concepts we learn out of the books into labs that we do. This class is never boring, just about every week we are doing some sort of lab or a project. Mr. Kliewer is a great teacher who can help students without telling them the answer. He will never give up on a student but will only help them if they have the will and are determined to get help. We had some challenges with the new trimester system, but it also gave us more time to work on our labs and lectures. The trimester system affected the projects we had time to do but we were still able to do the hot air balloon project, learned about physics, and we learned and built robots.

This year we did the Hot Air Balloon project again. This year was a LOT easier than last year. This year we had experience doing this project so we knew how hard we had to work and how much time we would need. Also this year everyone worked together and we were able to spread out the work equally. This year we knew all of the math and everything that we needed which was a relief compared to last year. This year we were copied our design from last year. One bad thing about using the same design as last year is the fact that you don't get the sense of accomplishment that we did last year. There were defiantly good things about doing the same design is the fact that we roughly knew how big we needed the balloon. We also knew how to make the balloon and by make the

balloon I mean putting it together. This made us work like clockwork. We were able to finish the entire project and have a little time to relax. Unfortunately our balloon didn't work that great due to a very stupid repair we made to a rip in the balloon. Instead of just gluing a patch on the balloon we just taped the rip. This was a stupid mistake that killed the thrill of the launch day. When we went up to inflate our balloon, as soon as we let go of the balloon the tape failed and our balloon practically rip in half. This was a total fun killer.

We also began to learn about physics. This was a difficult subject to learn, but once you understood the concepts it became much easier. We reviewed along with expanding and solidifying concepts that we had previously learned last year. We also studied cosmic rays. We learned some background information, and then we created our own experiments and tested them. On this project my team was not nearly as good as my hot air balloon team. We were constantly arguing, we didn't share the work equally, and we never truly finished it. From the data we got, which little could be used; we couldn't find anything special about what we had thought. We thought that the temperature may have something to do with the amount of cosmic rays entering the atmosphere. We thought this because we thought that when it was hot the atoms in the air would be going faster than in the cold so the cosmic rays would get deflected. We believed that the colder it was the easier it was for the cosmic rays to get through. We did have a hard time getting data that we could use because it seemed that there was always something missing. After we got some useable data it took us so long to download and look at it that we could barely look at two days of data. Those two days that we did look at appeared that there was no connection between heat and the amount of cosmic rays.

We also learned and build robots this year. Personally I thought this to be the best thing that we had done all year. We had to learn how pulleys, gears, joints, and levers worked before we could even begin to look at our robots. This was not as fun as building the robots. This was work and very confusing concepts to learn. It was very hard for me to learn because I really had no way to relating it to anything. I was not as lucky as some of the other people in the class that ride motorcycles or work on cars so I knew nothing about gears. Once we got to building the robots and learning about the electronics I did much better. I was very stupid during this project however because I worked by my self and I did the largest kit. I was scared when I realized (after I had started) that the instructions said that it required 5 hours of advance soldering and a bad sense of humor. I probably spent a total time of 7 hours soldering my robot and when it was done it didn't work. This made me so mad because I had spent 7 hours soldering, and I had even caught my self making a mistake and it still didn't work. Also trying to figure out what was wrong I missed some of the other things that we had to turn in besides the robot. If I were to redo it I would probably have chosen a different kit, worked with some one, or maybe do the same kit but be even more paranoid about following the instructions.

This was a fun but very challenging year but I would do it again in a heart beat. This is the best science class that our high school has to offer hands down. This class is also interesting because it is true you learn hands on. This class I also believe to help you more outside of school more than any other class because it teaches you how to think outside of the box and it also isn't a class that just gives you a problem and you must figure out the answer. This class you need to think up the problem and think of everything that you need for the answer. This class is also not just a class for people who

want to become an engineer later in life but also teaches you crucial thinking skills for any job that you may go into later in life. This was a fun class this year and I'm very glad that the course will still be continued but I am very sad that Mr. Kliewer will no longer be the teacher.