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The experience of doing the jpl invention challenge is amazing. It is so great to take part in something amazing and I love every minute of it. it is tough and frustrating but it is worth it. you get to work with great people and meet new people. you can see the great ideas of other teams and see how your solution compares to others. it is fascinating to see all the different creations. the competition makes you really think about a way to solve it. it is definitely worth it and I am very happy we tried. just like any experience there is always something to take out of it. There is always something to learn.

when we were starting the challenge we initially couldn't think about what to make. these challenges have many solutions and we couldn't pick one. we had four or five ideas and we could only make one. those ideas also had sub ideas, for example how many we would make or how we would make the stand. after picking we had to make a proto. we started with cardboard and a bucket. the prototype worked perfectly so we kept the idea. we then designed it. kevin caded the idea and Cole and I designed it while others worked on a stand idea and tested the proto. it was all going well but we were a little behind. we scavenged the wood and started building. the whole project was organized well and we had a cad of what we needed and what we had. we started working on what we needed. The Millers went out town so we couldn't use tools so the day was stressful. it wasn't a good day. we tried to work and catch up on time but without tools the whole time was stressful. after that we really talked and fixed the problem.

then we finished Hans which is what we named the cannon. then we had a idea to make Franz a second cannon. we bought wood for Franz and we were starting to build but we were stopped. we were told we should test and stop the building of another device. we decided to make a stand but again we were told to test so we did. we tested for three days and we realized that if we lined the cannon up the same way every time we could just use the table. we set up the lines and started more testing. the testing lasted for about a week and when we were done we were ready. we were so excited for the competition and had gotten 90 points on multiple tries. Come the day of the completion we were so excited. We got to the square and asked to see the balls. One ball was perfect and the others were a little small. We asked if we could use one ball three times and they said no. this was one hint that we were going downhill. The second hint was when they told us the square was too big. This felt weird but we went ahead with our plans.

When we shot first at the candle and missed it felt weird. We had perfected that candle and we were sure we should have made it. We still kept going but when we pulled the device up to shoot again we heard a snap. The device broke in the most important part. The ball holder was broken. We walked off the stage frustrated. We wanted to blow off steam so we found a giant tire and rolled around in it for a while. We had some good tacos and left after the ceremony.

I think the commotion taught us to really plan ahead. We were not as prepared as we should have been. We didn't account for the ball size and we should have accounted for the error in jpl and in our device. I really learned how to take a loss and how to prepare for what is ahead and that a tire is a great way to blow off steam. We learned a lot about factoring in error and next year we will not make the same mistakes. We have learned from our mistakes.