



FIRST OVERDRIVE
2008 FIRST ROBOTICS COMPETITION



TEAM 2429
La Canada High School - JPL

Team History

Team 2429 found its roots in an e-mail from Kevin Watson an engineer at JPL to Jenny Witman a teacher at La Canada High School. Kevin has been very involved in USFirst for some time and decided to push for a team at the public high school nearest to JPL campus. Kevin also recruited the help of Matt Haberland, a recent graduate in mechanical engineering from Cornell who had participated in USFirst both as the member of a high school team, then as a college mentor. On August 7th, Kevin invited Matt and Jenny to join him in the courtyard of the JPL campus to begin planning the new teams rookie season.

It quickly became clear that Jenny, who was a new teacher and would be taking credentialing classes, would be unable to head the team during the very intense build season. Steve Zimmerman, a fellow science teacher at LCHS, volunteered to be the head coach for the team. He brought his considerable coaching experience to mentor our first season.

Once school started that fall, things progressed quickly. Jenny began recruiting members for the club and over a series of call outs the team formed. The students began meeting daily during their SSR (home room) and during lunch until the build season began. They assembled small robots thinking through each step of the process and preparing for their new roles in January. Additionally, lunch speakers came in to council the team, and Kevin Watson began teach a subset of students to code.

Behind the scenes, work progressed to prepare space for the students. A generous donation from Lockheed Martin provided computers for the team, and the teacher office in one of the science rooms became the new computer lab. Work also began in the woodshop as the team would be taking over the storage room, requiring the disposal of old equipment and rearranging of storage space.

Team Goals

Have fun, learn engineering and get the Rookie Award! And we did, we were awarded the “Rookie All Star Award” at the Southern California Regional, 2008. Now it is off to the National Competition in Atlanta!

Team’s First Impact

As a rookie team, our FIRST impact has grown and is still expanding. Initially we started by finding 15 students who were interested in engineering. A few weeks later, we shocked the school at the club day by showing off some of our own home projects such as a motorized skateboard and a Jacobs’s ladder. Club day was surprisingly successful and more and more students trickled into the class during the next few weeks. At one point, we had to cap the club at 27 people (luckily we didn’t have to turn anyone down). As a team, we have high hopes for the future of FIRST in our neighborhood. We look forward to displaying our robot in the next pep rally and next fall potentially marching it down main street La Canada in the fall Homecoming parade. Also outreach to the local elementary schools is on the list of potential ideas. As a team, we strongly agree that FIRST is only going to get bigger and bigger at La Canada High School in the next few years. One student, a varsity football player, suggested having a small robot race around the field during half time to show off our hard work and energize the fans.

Team Strengths

As a team, we have a few vital strengths. First of all, our determination has made this robot possible. Every day we set goals and most of the time would work until we finished our list of goals. This leads to our second strength, flexibility. Whenever a scheduled practice would go a few hours over, no one would complain. Several times we had to extend practices, and usually it was because a student recommended it so that a goal could be met. Lastly, the strength that we have in each other was probably the key to our success. As a team, we quickly had to learn to rely on each other. Whether it was a gearbox that had to be finished or a specific bolt that had to be bought, we always knew that our teammates would follow through. These strengths made us a very strong squad for being a rookie team.

Most Significant Challenge Overcome

Our most significant challenge would be to overcome the fact that none of our team members had ever built a robot of this magnitude. At first, when the kit of parts arrived, we were all overwhelmed at how much work the robot appeared to be. Slowly, we started to make progress, and by the end of three weeks, we were jumping for joy when we had a robot that could score points (because it was mobile). I think that was the point when we overcame our fear of failure and started moving towards success. After that halfway point, it was smooth sailing from there with the occasional bumps that are only expected. I think that overcoming this challenge also promoted team unity and that was the first time we could call ourselves a team.

Robot and Game Strategy

Our robot seeks to accomplish several simple tasks. Knock the ball off the rail and herd it around the track. We see these tasks as both offensive and defensive. By knocking our own ball down at the beginning and moving it quickly around the track, we can score points. We can also slowly herd the opponent's ball, keeping them from scoring bonus points and then knocking any opponent ball down at the end of the game.

Outreach

Following our return from the Southern California Regional, we were so excited we started planning three outreach events. The first to coincide with our trip to Atlanta is a school-wide Robot Haiku Contest to be judged by our Honors Social Science Teacher, Mr. Yoder. The second event we would like to plan is a regional team outreach to the Jet Propulsion Lab. A day at JPL where all the local teams can come together and present our robots to the engineers in hopes of enticing more mentors to our respective teams. Lastly, we want to sponsor a FLL team at one of our elementary schools, maybe bring one or two students to the Atlanta completion .

Public Awareness

Our public awareness has been growing since we began building the robot. Several additional staff have come to help as well as other students who want to get involved next year. The word has gotten out by visually being around campus, parent newsletters, two web sites that we operate and videos posted to youtube.com and a few articles in the local newspaper.

LEEC

La Canada High School Engineering Club



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Come visit us at www.calzim.com/first