Andover High School

FIRST Robotics Team

2009 Rookie All-Star Award Submission

Team # 2834

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2009 Rookie All Star Award Submission

What does it mean to be a rookie team? Does it merely mean we are a new team so other FIRST teams will not expect much from us? Does it mean we should just be busy worrying about our own team and have an excuse to not spread the word of FIRST? We don't think so.

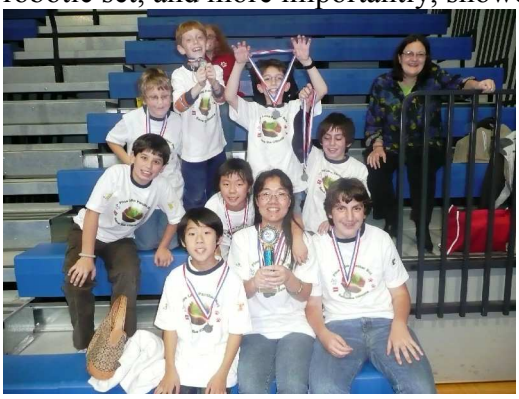
What have we done that makes us deserve to win the Rookie All Star Award? What sets us apart from other teams?

OUR HISTORY

Team 469 from International Academy which is a sister high school in our school district had recruited at Andover High School in the past. A few students had participated over the years. Instead of taking the easy way out and joining Team 469 which is a great well established team, we decided to answer the call to have a FIRST Robotics Team at as many high schools as possible and started our own team in June 2008 with 5 students. We established strong support from the high school principals and school district superintendent who wanted to see us succeed after they learned what FIRST was about.

FIRST LEGO LEAGUE (FLL)

Within a week of forming the team, we approached our middle and elementary schools about forming FLL teams. We ran two free one-week summer robotics camps for about 20 Pine Lake Elementary students as a way to give back to the community. We introduced them to the LEGO Mindstorms NXT robotic set, and more importantly, showed them that science and technology can be fun too. As part of our partnership with Pine Lake Elementary School, we helped them form two FIRST Lego League teams (#2392 and #2805) and we sponsored and mentored them in the fall. The teams were made up of students from both Pine Lake Elementary School and West Hills Middle School.



COMMUNITY OUTREACH

Besides issuing press releases, an article about our FIRST Robotics team and recognizing Chrysler Foundation as one of our main sponsors was also published in the fall issue of Community Connections which is a newsletter that is mailed to every household in the school district and all district staff members.

Instead of setting up an account from the local college that our mentor team 469 uses to receive tax deductible donations, we deliberately went out to talk to other local colleges and ended up selecting Oakland Community College as a partner. The main reason is that OCC was not yet involved with FIRST and we wanted to include them in the FIRST community. This partnership has grown to their letting us use part of their robotics lab as our build site. They are also considering offering a scholarship to FIRST students.

On 1/31/09, during the busiest time of the build season, we had an open house and invited our sponsors and bronze level supporters to visit us so they can see what it is like during a typical work day. A few employees from our sponsor, PTC and their families came. Our high school principal and the coach of one of the two FLL teams that we sponsored also brought their families. They learned about FIRST, inspected our robot, reviewed the game challenge, toured our website, and reviewed our CAD model of the robot. The kids played with the Orbit balls trying to score points into the trailer. We also let all our guests including the kids test drive our robot. For us, it was time well spent even though we lost some valuable build time. We will also arrange another open house after the build season is over and invite a bigger group of people when we have more time.

We want to give back to the community that our school is part of. Especially during this economic downturn, we want to help others who are less fortunate than we are. We decided to volunteer our time at Yad Ezra which is a food pantry that distributes food to needy families in Southeast Michigan. Our team worked there the morning of February 8 and helped package food to be sent out. Another community service event that we are scheduling is to participate in a work day with another school club for Habitat for Humanity. Some of the power tools we have will come in handy for this event.

SHARING WITH OTHER FIRST TEAMS

Since our team started, we have received a lot of help and advice from other FIRST teams, from our main mentors Team 469 and 33, and from other local teams 67, 217 and 302, and numerous other teams who generously shared their knowledge through their websites and Chief Delphi postings and white papers. We wanted to give something back as well. Our lead mentor developed a scouting database with an improved way to rank teams. It is useful for rookie teams like ours and other small teams who do not have the resources to scout and record statistics of every team and every match. We posted it as a white paper on Chief Delphi and we will update the database regularly as regional results are posted each week. Our lead mentor gave a seminar on this topic to help Team 302 with their scouting plan and also at the Novi kickoff event on Jan 3.

To show our appreciation to PTC who is one of our main sponsors, we volunteered to co-host a free one day hands-on workshop to all Michigan FRC teams on how PTC software can help reduce the time to design their robot. We helped in promoting and organizing this event. Our school district IT staff spent many hours installing all the necessary software on 30+ computers in the computer lab. A total of 35 people representing 11 teams from all over Michigan attended the workshop. A video was also made and sent to teams who were interested but could not attend the workshop.

IMPACT OF FIRST ON STUDENTS

The students grew from total strangers in the beginning and slowly gelled together to became one close unit. Coming from very different backgrounds, we learned to trust and depend on one another.

All of the students on the team were new to FIRST Robotics. Our mentor put together a series of training on different areas of robot design. We also invited guest speakers from Team 469, 33 and 217 to share with us their areas of expertise. Together with reading the two books in the FIRST Robots: Behind the Design series, the students learned a lot in a short period of time. All the students also learned the safe and proper use of machine tools.

It was also an unparalleled opportunity to learn industry software like Pro/Engineer and LabVIEW. All these are things that without the FIRST program, the students would not have learned in high school.

SPREADING THE MESSAGE OF FIRST IN THE SCHOOLS

Like many other teams, our recruitment includes flyers, posters, announcements on the school PA system, and email to all families in our high school. A unique way we spread the message of FIRST in our school is that we let FIRST sell itself. We invited all the teachers and parents to a local regional last year so they could feel the energy and excitement themselves. Another innovative way to get exposure is to have the robot from Team 469 run around in the school hallway during the busy lunch hour and let students drive it. Some teachers and even our principal came out to try.

We want to share our enthusiasm for science and technology with the whole school district. The 3 high schools, 3 middle schools and 4 elementary schools together have about 5000 students. Our long term goal is to have a FIRST program in every school. After the FRC season is over, we plan to demo our robot at all middle schools and upper elementary schools in our district to get the kids interested in science and technology. We plan to start more FLL teams in the next few years as our own robotics team membership grows. We also want to help start a FRC team at our sister Lahser High School next year.

We invited Michigan Senator John Pappageorge to come speak to our school. The topic was on importance of science and technology in helping Michigan's economy. The Senator also met

privately with the robotics team afterwards to learn more about the students' experiences in FIRST Robotics Competition.

FIRST Robotics activities are recognized by the school district as academic enrichment options and are listed in the High School Course Description Book.

ALIGNMENT OF TEAM POLICY TO FIRST PHILOSOPHY

NO-CUT POLICY

Some teams use a selective process in their recruiting process. The students fill out an application form and have an interview with teachers, mentors or student leaders. In the name of putting together the "strongest" team possible, the team rejects students with lower GPA or not having the desired skills or background. This sends a wrong message to the students who did not get selected, implying that they are not good enough. Most of them will probably end up not pursuing a study and career in science and technology. FIRST should not be for elite students only.

Our team has a no-cut policy, no minimum GPA requirement and no experience necessary. We put a reasonable minimum weekly time commitment up front to meet in order for students to be on the competition travel team.

NOT RECRUITING FROM OTHER SCHOOLS

We made a conscious effort not to actively recruit from outside of our school. Some teams do that because it gives them a bigger pool of students to pick from. They tend to get people who are already inclined to this type of activity. We call these low-hanging fruits which are easy to pick. What they do not realize is that they removed the seeds from these other schools where new teams come from. Our goal is to get as many high schools as possible to have their own team. We decided not to recruit from our sister high school and form a combined team even though we are from a relatively small school with lots of extra curricular activities to choose from. We want to help them form their own team next year.

CONCLUSION

Even though we are a rookie team, we think in some ways we can be a role model for other FIRST teams to emulate and especially future rookie teams who are just starting out like we did this year. We think that our involvement in the community, our no-cut policy and not recruiting from other schools policy are better aligned to the ideals of FIRST.