

Chairman's Award - Team 2403

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2016 - Team 2403

Team Number

2403

Team Name, Corporate/University Sponsors

Bluemedia / MPS-CTE / The Boeing Company / Hunter Contracting / Freescale Semiconductor & Red Mountain High School

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2015/2016 year and the preceding two to five years

"Everything I do has been changed because of Plasma. My outlook on personal health has been changed, along with my leadership and technical skills. I now look at community service as something I want to be a part of (2013 Rookie)."
"Plasma has opened me up to my career option. I came into robotics not knowing anything about FIRST or Plasma but now I love the engineering world and I can't wait for college. Without Plasma I would've never found out what I truly loved to do (2014 Rookie)."

Describe the impact of the *FIRST* program on your community with special emphasis on the 2015/2016 year and the preceding two to five years

This year Plasma has taken a unique approach to outreach & has focused more on service opportunities. While still actively participating in regular outreach we have also looked for ways to serve the community each month. We've gone to a food bank, built legos for competition, adopted a family for Christmas, planted gardens, helped with science projects, made a painting for an art fair, & many more small acts of service. Not only have we improved our community, but we have improved ourselves.

Team's innovative or creative method to spread the *FIRST* message

Plasma spreads the message of FIRST through staying healthy, doing good deeds and (most importantly) Star Wars! We started two new hashtags this year, #FIRSTgetsfit & #Plasmaforward. Through social media we encourage people to take a look at FIRST and learn what it's all about. Also, our team has carried a Star Wars theme throughout the whole year, from watching all 6 movies during our FLL lego build day, to selling tickets to the new Star Wars & watching it as a team. May the FIRST be with you!

Describe examples of how your team members act as role models and inspire other *FIRST* team members to emulate

Plasma holds its members to higher standards than the average student & expects them to always act as role models. One unique way we are doing this is through our FIRSTgetsFit campaign. We have been incorporating fitness & health into our program this year and encourage other teams to follow our lead. We have weekly exercise activities & are planning a fun run event at the end of February. We encourage healthy eating & a few members have even given up drinking soda for all of build season.

Describe the team's initiatives to help start or form other FRC teams

FRC team 4565, Skyline Coyotes, was founded by Plasma. Team members mentored them, and even provided a build area at RMHS for their team. Since Skyline's start in 2013, both teams have had the opportunity to use gracious professionalism and cooperation during build seasons, sponsorship presentations, and overall team organizations. Plasma also helped restart FRC team 2478, Westwood Robotics. We gave them mentors, supplies, & even a cRio to help build their robot.

Describe the team's initiatives to help start or form other *FIRST* teams (including Jr.FLL, FLL, & FTC)

Plasma has helped many FLL teams in our area. We are always looking for ways to support new teams. At the beginning of the school year, we go to many of the elementary & middle schools in our area to help them spread excitement for FIRST. One school we went to usually forms one team. We went to their introductory meeting and brought our FRC robot. The kids loved seeing the robot and were so excited that they ended up forming 3 teams! One of our members then helped mentor all 3 teams.

Describe the team's initiatives on assisting other *FIRST* teams (including Jr.FLL, FLL, FTC, & FRC) with progressing through the *FIRST* program

Over the years, Plasma learned that kids that compete in FLL make great future Plasma members. We have tried to build a good base by encouraging and supporting FLL teams as much as possible. We hold practice sessions in our build room, sponsor a scrimmage, mentor teams, & run a tournament for FLL. We are also working on expanding our FTC program out to local middle schools to give more FLL kids a chance to expand their experience. We bring teams to our build room to see what FRC has to offer.

Describe how your team works with other *FIRST* teams to serve as mentors to younger or less experienced *FIRST* teams (includes Jr.FLL, FLL, FTC, & FRC teams)

Plasma has reached out to the other FRC teams in our school district. This summer we hosted a barbeque for all the teams in hopes that we could make connections and encourage collaboration. We are planning more combined activities between the teams. Plasma has also helped the FRC team we started, 4565, by building an extra set of field pieces for them to practice with. We have mentored and assisted many FLL teams, clocking in more than 350 hours this season.

Describe your Corporate/University Sponsors

Our corporate sponsors include Boeing, BlueMedia, Freescale, and MPS CTE. All of these sponsors have been with us for 3 years or more. We have worked hard to encourage lasting relationships with our sponsors. Boeing provides us with a grant and a mentor each year. Bluemedia has provided many personalized products for our use. Freescale has given us an opportunity to teach a summer camp at their facility. MPS CTE has been very supportive with supplies and many opportunities for outreach.

Describe the strength of your partnership with your sponsors with special emphasis on the 2015/2016 year and the preceding two to five years

Our sponsors make our team possible. They provide us with tools, money, and mentors. We appreciate all they do for us and try to find unique ways to work with them and thank them. We have been able to assist several of our sponsors. Last year we brought two of our sponsors together to make something special for our school. The year before we made buttons for one of our sponsors to hand out. This year we have invited our sponsors to work alongside us in several service activities.

Describe how your team would explain what *FIRST* is to someone who has never heard of it

FIRST Robotics is an investment students make to prepare them for a future full of success. In a program typically run as an after school club, participants learn sportsmanship and respect to a greater level than any athlete. Every participant learns life skills such as how to use basic tools & how to speak in public. "Rivalry" team members become the best of friends. As the name says, FIRST is an experience second to none. It a competition about building robots and building better people.

Briefly describe other matters of interest to the *FIRST* judges, if any

Plasma has been lucky to be able to expand into a new build room this year. RMHS has been supportive of our growing program and has given us our own room to use for robotics. Not only have we enjoyed the extra space, but we have been able to use it to better help other teams. We were able to set up 4 FLL tables during the FLL season so that teams could come in and practice on competition tables. We also used some of the space to build FRC field pieces for us and another team we mentor.

Team Captain/Student Representative that has double-checked this submission.

Brandon Woolgar

Essay

Just nine years ago in an imagination far, far away

Plasma Robotics: The FIRST Awakens

It is a period of great boredom after school. Clubs, filling the void, have won their first victory against the evil Wasted Time Empire. A rebel teacher has managed to find his way to the FIRST website and has begun work on Wasted Time's ultimate weapon, FRC.

Pursued by sinister agents, Captain Video Games and Darth Television, OB1Kellis races to the engineering club & begins to explain the rules of the game FRC to try to save his students & restore learning to the galaxy...

Plasma Robotics, FRC team 2403, was the very first FIRST team in all of Mesa, Arizona. Since that first year, we have grown, expanded, & shared our excitement for FIRST all over the state. We have helped awaken the FIRST within the 55 teams that now exist within our city and many more teams nearby.

There's been an awakening. Have you felt it?

STEM is currently a buzzword in education. However, until kids are inspired they haven't found an interest worth taking action. Plasma has spread STEM through our many outreach events. When we go to events, we see kids' eyes light up when they see our robot. Getting to touch, interact, and drive our robot awakens a spark inside them that encourages them to learn more. We do more than just show our robot. We let the kids aim and shoot Frisbees at a target. We have been many places around the state, including the Phoenix Zoo, the Mesa library, the AwesomeFest, ASU homecoming, & the IDEA Museum. At each event, we work hard to inspire kids & parents & get them involved with FIRST. We hand out robot drivers licenses. On the back is information about the different programs & links to find information. Jennifer Velez, FLL partner for Arizona, saw our licenses and liked them so much she requested some of her information be included.

Plasma also uses the spark to teach kids about important subjects. Working with STAND, we were able to make a robot that teaches kids the dangers of tobacco use. This robot has been to events and demonstrations all over Arizona. Besides designing and building the robot, we wrote up instructions for the Frisbee shooting robot so that teams all over the state can assist STAND in helping to demonstrate our robot. Plasma has also been working with local Boy Scouts. During our summer camps we teach a robotics merit badge workshop. This year our robot will also help a scout troop collect food in their Scouting for Food drive.

Always pass on what you have learned.

Learning is a major part of Plasma. We value our mentors, coaches, & teachers who share their knowledge. Our senior members help teach our newer members what they have learned. We are always looking for ways to share knowledge & members are encouraged to help other teams. On a yearly basis, Plasma mentors between ten and twenty FLL teams in our area. Our members, many who have participated in FLL, meet with teams, offer support and provide tips. One of the most rewarding parts of mentoring is seeing the excitement & smiles on faces when they are able to do something with their robot they did not think they could do. This is FIRST awakened.

Beyond mentoring & assisting teams, Plasma also runs events for FIRST. Our FLL scrimmage & workshop has been very successful for the last two years. We have been able to help a dozen teams each year. Not only do we provide a mock regional, but we also supply members to troubleshoot & answer questions. Several teams have told us they weren't sure that they would be able to compete until they came to our scrimmage. That is what makes all the hours invested worthwhile & inspires our members to help even more. Plasma runs the most successful FLL regional qualifier in Arizona. Our regional was the first one to fill to capacity during registration & had a waiting list when all other regionals were below 50%. We are proud to say in the 5 years we have run our popular tournament, we have never run late. Besides running our event, our members also assisted at two other regionals. Plasma had the opportunity to host & run the largest FTC tournament in the state during the 2013-2014 season & we look forward to running another event in the future.

Through mentoring FLL & FTC, Plasma has been able to awaken FIRST within the community. This is a bug these students catch & hold on to for the rest of their lives. Many of Plasma's most active team members have been recruited because of the things they have seen at our events. Many other students who have felt Plasma's touch in FIRST's lower levels have gone on to join FRC teams we assist at Westwood High School (2478) & Skyline High School (4565).

Help me Obi-Wan Kenobi, you're my only hope.

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Last Season, after the Arizona-West regional, organizers of the event asked each team to find two people to help pack up the field. After seeing just a few people picking up, all Plasma decided to help. The whole team, mentors & students, happily jumped in and helped pack the field in record time. This opportunity to serve was really enjoyable. We made it a goal to make service a permanent part of Plasma.

Over the last year, Plasma has constantly looked for opportunities to serve. To help inspire our members, we launched PlasmaForward. This campaign promotes frequent acts of service & encourages everyone to look for ways to help pay it forward. We kicked off the action as a team, volunteering at a local food bank to sort incoming food donations for distribution. Since then, we have made it a goal to participate in one big team service activity each month. Individually, members are also encouraged to Plasma Forward & look for small acts of service they can do every day & every week of the year. We have found that service is addicting. The more we do, the more we want to do. We hope to make a permanent change in the culture of the team & ingrain service as a permanent part of Plasma.

When I left you, I was but the learner; now I am the master.

Since it's inception, FIRST has had the opportunity to leave its mark on many students. As they leave Plasma & progress into the future, alumni carry the FIRST spirit with them everywhere they go. Through their actions and examples, FIRST has had the opportunity to awaken all over the world. One alumni recognized the influence on his life, saying that "FIRST was the vehicle that allowed me to discover my passion for Software Engineering." This member was introduced to engineering because of our need for programmers. Another came to Plasma because she had friends on the team. She is now studying civil engineering in college and credits FIRST with inspiring her interest. In

fact, FIRST has inspired almost all of our alumni to pursue STEM careers. For the last two years, all of our graduates went to college & are pursuing STEM degrees. Students walk into the robotics room curious about Plasma & leave interested in engineering & technology.

For our alumni, FIRST doesn't end with high school. Many have returned as coaches & mentors. Several have returned to mentor Plasma, helping to share the passion they have with the team they still love. Other alumni find different ways to stay involved. One returns yearly to lead a workshop at Arizona's FRC Kickoff. Another alumni in the Air Force helps Idaho's team 2122, The Tators. All in all, FIRST has had a profound impact on the lives of our alumni & they are eager to share.

The FIRST, it's calling to you. Just let it in.

Since Plasma was formed, we have worked to be involved in our school & to help expand Engineering and Robotics past the normal confines of the build room. Plasma has been able to expose many of the more than 3,200 kids at our school to robotics. In the last five years our robot has participated in a dance recital & we have made robots to participate in three plays for the drama department. We know we are reaching other students because one of our members joined the team after seeing the robot dance. She now helps inspire other members by leading Zumba for the team's FIRSTgetsFit campaign & choreographing her own dance routines for the robot.

Student council has come to appreciate what Plasma can offer the school. We've helped support several activities this year, including their Christmas adopt a family drive. Not only did we adopt a family, but we decorated last year's robot as a reindeer & used it to carry presents for Santa at a party for the 36 families the school adopted. We also support the school's RedMountainWay campaign & encourage our members to use their Plasma Forward spirit on campus to inspire the whole school to do acts of service for each other.

Since 2013, robotics has been recognized as a sport at our school & district. Our members have the ability to earn letters. This came about after the team tracked hours spent working on robotics & realized that we put in more time than the football team. The principal was impressed with our hard work & approved. Plasma has also been instrumental in getting the district to offer a robotics class. Our founding teacher helped develop the original curriculum for the program.

Laugh it up Fuzzball!

We try to take robotics places where it wouldn't normally be & make it fun. We made last year's robot into a butler & used it to help share things. At Halloween we dressed the robot as a ghost & took it trick or treating. At Christmas is served as reindeer & held presents. Weekly teambuilding activities give the team a chance to have fun & get to know each other better. Weekly FIRSTgetsFit activities give the team a chance to go outside & get exercise while having fun. Our Star Wars theme for the year has awakened interest among many we are involved with. Robotics is hard work, but it can be a lot of fun. When the team is having fun, the work goes faster & the team learns more. FIRST has been awakened within Plasma & we are spreading our passion with the world.

?May the FIRST be with you!

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