

Chairman's Award - Team 399

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2018 - Team 399

Team Number

399

Team Name, Corporate/University Sponsors

NASA/NASA Armstrong Flight Research Center/Lockheed Martin/Northrop Grumman/Antelope Valley Fair Association/Lancaster West Rotary/Antelope Valley Union High School District/AndyMark/ITEA (International Test and Evaluation Association)/Nibblelink&Lancaster High

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2017/2018 year and the preceding two to five years

Involvement gives students a chance to intern at agencies like NASA and Lockheed. Because of the opportunities provided by FIRST, students have gone on to attend universities all over the nation like University of Michigan and Rensselaer. Our team has helped members discover their passions in all subjects, varying from accounting, graphic design, marketing and engineering. FIRST stays with our alumni as they mentor FRC teams, volunteer at FIRST events, and help expand our outreach globally.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2017/2018 year and the preceding two to five years

This year, we hosted a seminar to encourage the foster youth of our school to further their education. The gracious professionalism of FIRST inspires us to take action in times of need - such as when we collected clothes and food for victims of the Sand Fire, and when we hosted a fundraiser to benefit victims of the recent hurricanes. We have also reached out to new audiences such as toddlers and Special Education students. Through many free workshops, we assist our community and inspire others.

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

399 works to spread the FIRST message to as many people as possible by only hosting free events such as Bottle Rockets, Day of Code, and Mastering Multi-Media Workshops. Our Eaglets Program and FIRST for Girls Workshop invite 6th-8th graders to work with us during different parts of our season to get first-hand FRC experience while shadowing our team members. This year, we expanded our annual week-long Summer Robotics Workshop by adding two new locations, reaching a total of 180 students.

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

We put in an extra effort to instill FIRST ideals into both our team members and mentors. From there, individuals are able to translate these deep-rooted values into their everyday actions. They bring them to competitions and into our community. In serving as role models, our members mentor FLL teams on a weekly basis and work to inspire students from various backgrounds and skill levels through free workshops and events, providing them with an opportunity they wouldn't have had otherwise.

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

This year, we helped one of our past members start team 7260 in Arkansas. They now have 20 members, and are continuing to grow with our guidance. We are currently collaborating with team 6666 from Mexico and with students from Japan. Through a series of Skype calls we showcased our FRC and FTC robots to introduce them to FIRST and shared our expertise. We continue to assist local junior high and high school teams through mentorship and the use of our shop.

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

This year, Team 399 sponsored an FLL Kit as well as organized registration funds for a local tutoring center in an effort to start a team. Outside our area, we contacted an alumna teaching in Spain and sent them a brand new FLL kit, introducing them not only to FIRST, but STEM as a whole. We also reached out to another alumna who teaches in Japan and introduced her class to FTC through a series of Skype exchanges.

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

Team 399 started a new event last year in which our team members built, programmed, and competed with EV3 robots in an effort to expand our pool of qualified mentors. Team 399 also annually hosts and runs the High Desert Lego Tournament, a non-qualifying FLL tournament for an average of 20 local teams. We also run a qualifying competition, the AV Techno Classic, with the FLL program from Joe Walker Middle School. For both events, we often assist local FLL teams as they progress through FIRST.

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)

As an experienced veteran team of 19 years, Team 399 is always available to offer any expertise we have with others. For years, we have mentored FLL teams at Amargosa Creek Middle School, and we are currently coordinating with Gregg Anderson STEM Academy to provide mentors for their newly forming FLL team. We also are providing mentorship to a new FLL program at Innovation Education Tutoring Center.

Describe your Corporate/University Sponsors

Sponsors of Team 399 include organizations that range from local businesses to large companies. Being in an Aerospace Valley has helped us receive sponsorships from NASA, Northrop Grumman, Lockheed Martin, and the Air Force. We also receive support from small shops on our city boulevard, and larger organizations such as Walmart and College of the Canyons. We are proud that our sponsors come from different industries that recognize the importance of STEM and trust us to spread that message.

Describe the strength of your partnership with your sponsors with special emphasis on the 2017/2018 year and the preceding two to five years

Team 399 has established strong relationships with longstanding sponsors and has earned the support of new ones by giving robot demos and providing support at public events - including NASA at their Black Entertainment Television Fan Fest booth, Northrop's Boys & Girls Club STEM Camp, and Lockheed's LA County Airshow Tent. Recently, we've renewed our relationship with local rotaries and chambers of commerce. When gaining new sponsors, we establish a personal connection that will last for years.

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

FIRST (For Inspiration and Recognition of Science and Technology) demonstrates how robotics ranges from engineering to public speaking to relationship building. It inspires those who are in the program, from member to mentor, but also those who are not. We all work together for a greater purpose, meaning nobody is above another. Each year FIRST creates a game where we use problem solving skills, create a robot, and compete with other teams around the world while learning real world applications.

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

This year, Team 399 started establishing Robot Roadshow. We have designed a set of miniature robots and a field that we will bring to community events to allow the public to gain first hand experience of driving a robot. We currently have a developed business plan that we will use to search for sponsorships and grants in our area for this project. We hope that Robot Roadshow will inspire the youth of our valley to become a part of a FIRST team, and encourage them to pursue STEAM careers.

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

Kirsten Barrow

Essay

Over the past 19 years, Team 399 has built a strong platform of supporting our community. While recognizing the benefits of being an established team, we recently challenged ourselves to launch to new heights and explore new ways to serve our community and build new relationships. We've also embarked on a mission to apply STEM in areas we had not before considered. With this strong base, we are venturing farther, reaching a larger audience, and finding new ways to inspire.

Our sustained initiatives are home base. From this home base, we have built a reputation in our community, a reputation that allows us to propel even farther. Long-standing events such as card-writing campaigns have reached thousands of children and veterans. This year, we thanked those who helped battle the wildfires that have devastated many California communities, and delivered cards directly to local firefighters. Also, our team has hosted over 27 blood drives with the American Red Cross, potentially saving thousands of lives. As advocates for No Kid Hungry we have collected approximately 4,500 pounds of nonperishable food for our community. We have volunteered for the past 11 years at the Painted Turtle, a camp for children with life-threatening diseases. Every year, we invite the general public and special guests to our Robot Rollout, showcasing what can be accomplished with engineering and teamwork. In addition to these events, we represent FIRST to over 380,000 people at numerous public events including the Poppy Festival, LA County Airshow, AV Board of Trade Conference, Antelope Valley Fair, parades, and festivals.

At our home base, our workshops and demos give youth a chance to experience new interests at no cost. Workshops we have sustained, run, and hosted over the years include Eggstronaut and Eaglets, among others. Through Eggstronaut, 5th-8th graders are introduced to the engineering design process, while Eaglets offers 7th and 8th graders first-hand FRC experience. Our Bottle Rockets Workshop combines the two to teach 6th-8th graders the engineering design process, and introduce both students and parents to FIRST. We also invite middle school girls to shadow our team in our FIRST for Girls event. Building off momentum from previous successes, we added the Day of Code Workshop two years ago, which we host and run, providing kids coding experience by using Scratch to practice block coding. Our Day of Code activities now extended to other campuses too, like New Vista Middle School, who invites us to inspire young students about the power of coding, as we demonstrate our robot. Another new workshop that we recently added is our Mastering Media event, teaching over 20 students how to create through Adobe suite.

We have used the strength of our home base to reach new heights. A long-standing relationship that continues to propel us forward is with our high school's own Lancaster Academy of Multimedia, Programming, and Engineering (LAMPE). We've assisted LAMPE to run events such as the Gateway Academy, a week-long program for junior high students to learn about science and technology. We also support LAMPE's annual STEM Expo by helping students complete STEM projects. We even manufacture the medals given as awards in the STEM Expo. We team up with LAMPE in the community for events such as Celebrate America, and the new STEMposium (a forum showcasing STEM programs). Annually, we visit West Wind Elementary along with LAMPE to run workshops such as Balloon Cars and Robots that Draw. Through these events, we hope to ignite a curiosity, one that propels children's interest in STEM.

Venturing farther than home base, Team 399 has advanced by expanding many of our events, including Summer Robotics Workshop. For over 10 years, we have organized, hosted, and run SRW, a free weeklong workshop that teaches kids how to use VEX robots, and how to effectively collaborate in groups by working towards a common goal. This school year, we added two new locations, Chaparral Elementary and Valley View Church. All three SRWs were at capacity, providing almost 200 young students experience with robotics. Our longstanding support of FLL has recently taken off in a new effort to sponsor FLL kits for students new to robotics. Last year, our team-sponsored EV3 robot made it all the way to a team alumna and her 6th grade students in rural Spain. This year, a current 399 member is starting a new FLL team at a local tutoring center. We are sponsoring an EV3 robot for this young group of excited students as well.

Additionally, Team 399 has recently expanded our literacy initiatives. For years, we have hosted Robot Read Aloud (a monthly read-aloud to children at a local book store) and Laps 4 Literacy (a 5K to help promote literacy). These initiatives are now poised to launch forward into new territory, such as Palm Tree Elementary's Read Across America, where we were invited to read to young students and share about FIRST Robotics. Recently, Lancaster Library assigned us a new mission to host a workshop called Cubelets. By demonstrating small robots to elementary and junior high kids, we are advancing to new destinations. Our team has also taken RoboProm to new heights by hosting this event at both championship locations, giving more teams the chance to come together with the FIRST community and more students a chance to apply for our two RoboProm Scholarships.

Familiar with our successes running RoboProm, Lancaster High's Special Ed department is counting on us to help some of their important missions take flight. We are helping to organize two of their coming events, and monthly visiting their classes in order to run STEM activities. We are proud to provide diverse audiences with the message of FIRST, including Special Ed students at a local middle school.

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399 has ventured off, reaching out both nationally and internationally. Through multiple Skype exchanges, we have collaborated with students in Japan who did not know much about robotics. We are happy to have introduced the students at Tochiku High School to the engineering process and the FIRST organization. Also through Skype, we shared information on team structure and operations with Mexico's FRC Team 6666, the Regiobots. We even helped create new events the Regiobots will host in Mexico. We have also assisted in the creation of Arkansas Team 7260. By establishing and sustaining these relationships, 399 hopes to reach farther and inspire others both near and far to explore the principles of STEM with FIRST.

Continuing our exploration, Team 399 set out on a mission in 2016 to apply STEM in areas we had not before considered. We were awarded a grant from the Air Force to purchase needed materials and build theremins, instruments that use electromagnetic waves to play music. Adding the "A" to STEM in order to make "STEAM" has proven to engage a broader audience in science and technology. Children love to play the theremin at events such as Salute to Youth and community festivals. We also shared the artistic application of robotics by collaborating with our theater department to build a 5-headed dragon and featuring our robot as a character in the school play. We are confident that these efforts will extend the reach of the FIRST community.

Fueled by our past successes, we are venturing forth to add new, hands-on events for youth. This school year, our Robots Driver's Ed workshop equipped 22 middle schoolers with "behind the wheel" training, driving our 2017 robot through an obstacle course. Through this workshop, these children learned what it is like behind the glass of an FRC competition. Robot Roadshow, our most recent project, will feature a transportable field that will offer participants a chance to operate mini robots. We plan to bring Robot Roadshow to as many events as possible and inspire younger generations to embrace technology and engineering.

We are also exploring new ways to support and serve our community. After hearing that some of those who helped us organize Houston RoboProm lost everything to Hurricane Harvey, we organized a fundraiser for the victims of the hurricanes that hit various regions of the country. And, after learning that our community has one of the highest rates of youth in foster care in all of Los Angeles County, we reached out to a former foster youth and Team 399 alumna and hosted a seminar for those currently in the foster care system. As our own former team manager, Brianna Mariotti, spoke about how FIRST Robotics helped provide her structure, purpose, and motivation to continue her education, both foster youth and others in the audience learned that FIRST is much more than robots.

Another new mission this year is our recently developed Happy Healthy Robotics. When the last of the shelters for the local homeless population closed down, Team 399 launched an effort to collect warm winter coats, and assemble care packages of personal necessities for the homeless. We are coordinating with a representative from a charity called PATH (People Assisting the Homeless), to ensure that these supplies are delivered to the neediest populations, especially our homeless veterans.

Team 399 has made it our mission to spread the ideals of FIRST farther than we ever have before. We work hard, expanding our efforts to various audiences that haven't been able to experience STEAM on their own. From inspiring the youth of our community to educating foreign populations, Team 399 has had a significant impact in encouraging and advocating for the principles of STEAM and FIRST Robotics. The help we provide and the honors we receive inspire us to keep reaching for the stars, as we launch forward and explore even more ways to serve our community and share the ideals of FIRST.