Common Grant Application

Date of Application:

Legal Name of Organization: San Dieguito Academy Foundation

Executive Director: Leslie Saldana

Contact Person/Title
(if different from Executive Director): Sarah Parkes, Head of Sponsor Relations for Team Paradox

Email: sarahparkes@sdarobotics.org

Organization Website: http://sdarobotics.org/

EIN: 33-0629427

Address: SDA Foundation
PO Box 235109
Encinitas, CA 92023-5109

Phone Number: (760) 753-1121 x5085 Fax Number: n/a

Project Name: FIRST Robotics Team Paradox 2102

Purpose of Grant: (ex) General Support - The general operating funds will be used for hardware equipment and teaching supplies and robot kits for our outreach program to mentor grades K-12.

Beginning and Ending Project Dates: July 1, 2017 - June 30, 2018

Amount Requested: $10,000 Total Project Cost: n/a

Is your organization an IRS 501(c)3 not-for-profit? __X_ Yes _____ No

1. ORGANIZATION INFORMATION

- Summarize your organization's history.

The San Dieguito Academy Foundation is a 501(c)3 that supports quality programs and innovative classroom practices. The foundation works to bridge the gap between public education funding and the dollars needed to support educational goals primarily pertaining to San Dieguito Academy High School (SDA). SDA is a public choice high school dedicated to arts and creativity. Unlike a traditional high school, SDA lacks a football team and cheerleading squad and, instead, fills the void with a spirited robotics team. Robotics is an integral part to the school culture and thus sees great emphasis in school wide events.

Founded in 2006 by a small group of high school students, Team Paradox was the first robotics team created in our school district. Over the course of the past 10 years, the number of students on the team has more than tripled, and the number of students, teachers, and community members that have been affected by our team's outreach efforts and educational initiatives has grown exponentially. Each year, our team's activities directly affect 150+ students, mentors, and educators. Our student engineers, artists, machinists, programmers, and writers have been and will continue to work together to create an environment where creativity and passion thrive. As a FIRST (For the Inspiration and Recognition of Science and Technology) team, we compete with our robot alongside thousands of other high school teams at regional, district, and international competitions.

- State the organization's mission and goals.

Team Paradox aims to provide an outlet for students of all ages to discover and explore their passions for science, technology, engineering, art, and math ("STEAM"), by maintaining a student-run, community-supported FIRST Robotics team at San Dieguito High School Academy (SDA). Our goals include, but are not limited to: providing comprehensive STEM education opportunities to students and community members, lending resources and aid to other STEM efforts in our area, and fostering the growth of interest in the sciences in the community through Outreach and Marketing initiatives.

- Outline current programs and activities.

    - **Competition and Construction:** Our team, and every other FIRST high-school team, has 6 weeks (starting in early January) to design, program, fabricate, and test a robot to fit

the year's challenge. After this 6-week build period, our team attends 2 or more regional competitions, where we compete alongside 59 other high school robotics teams at each.

- **Rookie Education:** Geared Learning, our annual rookie education initiative, has proved to be very successful, increasing our rookie retention by almost 200%. It provides new team recruits, or rookies, with an in-depth view of how our team functions, and an introduction to Engineering, Marketing, Outreach, and Operations. New students also have the opportunity to meet with mentors, who often have dedicated their lives to STEM or a related field of study.

- **Reaching Out:** Nikki Arm, now a Senior on our team has taken her passion for STEM education to the next level. For her Girl Scout Gold Award, she decided to write a children's book, Riley Loves Robotics, in an effort to motivate young girls to pursue and develop their interest in STEM. Nikki has taught numerous classes and has helped to produce the next leading ladies of science wherever she goes. Nikki has decided to continue publishing books, which may be available in the FIRST online store in the near future. Her passion for STEM education and involving girls in science has made and will continue to make a large impact on our local community as we strive to continue our efforts to involve as many girls in STEM as we can.

1. **Student to Student Mentoring:** We are proud to share our dedication with new and younger students. Each year, we mentor at least 5 FLL (FIRST Lego League) teams. These teams are typically made up of 6-10 elementary school students, who build robots with Lego Mindstorm pieces. This mentoring program provides high school students with a chance to share their passion for robotics with elementary school students, who in turn are presented with a unique learning opportunity and role-models. We also continue to mentor the other high-school teams in our district, all of which we helped to start.

- **Community Outreach:** Annually, we participate in 2-3 Street Fairs, where, at each, thousands of people are introduced to our program and STEM. We are also featured multiple times a year in local newspapers, and even make appearances on local television stations.

- **Recent Accomplishments:** Last year, we won the San Diego Regional Competition, which meant that our 65+ member team, plus mentors and parents, would be traveling to Houston, Texas, to participate in the FIRST Robotics World Championships. Additionally, we earned the creativity award at the San Diego Regional for the innovative programming in our robot, and we earned the Dean's List finalist Award and Entrepreneurship Award at the Sacramento Regional for our excellent student leadership

and . Notably, this year, 1 out of the teams that we mentor made it to the state championships for FLL (FIRST Lego League).

- **Women in Our Program:** Throughout our 11 years as a team, we have been actively providing opportunities to girls anywhere from 9-18 years old to explore and pursue their interests in STEM. Currently, 30% of our 65-member team is female, which is 9% more than last year. In the past 5 years, we have seen a steady increase in the number of female students involved in our program as a result of our constant outreach efforts. Each and every member of our team is provided with the opportunity to further their STEM education, and we are proud to be working to inspire more women and girls to explore and thrive in this field.

2. PURPOSE OF GRANT

• Describe the proposed program or project.

We at Team Paradox are a student run, mentor supported high school FIRST Robotics team. It is our goal that all 65+ student team members are presented with the opportunities for them to explore and pursue their passions in STEM. This means we must maintain resources like our fully functional metal, wood, screen printing, photo, and auto shops. This program offers comprehensive education and introductory programs, mentorship opportunities, leadership experience, and endless resources for cognitive expansion. One of the most enhancing aspects of our program is our 6 week build season beginning in early January. During this period, students must work together to design, manufacture, build, program, and test a fully functional 120 pound robot. Here, student team members are presented with in-depth knowledge and experience in STEM.

• Identify the needs, problems, and/or opportunities to be addressed. What are the challenges to the project? Who else in the specified area is addressing this issue?

Our program is presented with a set of challenges, but an even greater set of opportunities, for both team members and anyone affected by our program. The costs of running and maintaining a FIRST Robotics team are extensive. They include registration costs, materials, robot transportation, and any other programs that the team utilizes. The other challenge that we are presented with is the threat of losing our metal shop and other unique resources that our school provides. If we lost these resources, we would likely be forced to outsource our fabrication processes. Our metal shop also presents opportunity. We share access to our metal shop with all of the other robotics teams in our district, which, notably, we helped start. Getting girls involved

in STEM is another huge opportunity that our team is becoming more and more involved in. Each year we are reaching out to more women and girls, and our team has seen an elevated number of girls in leadership positions. By providing unique opportunities to our members and encouraging them to take their passion to the next level, we have seen huge growth in STEM involvement in our local community.

- Identify the target population/geographic community served and how they will benefit. How will you reach this community?

Our target population is primarily the North County area, but we will extend our support further if the need arises. We reach out to people of all ages, race, social standings, economic backgrounds, and genders, but we primarily serve K-12 students. These students and community members benefit greatly from having unbridled access to unique resources such as our metal shop, specialists in the STEM fields, and access to professional engineering computer programs. Students are presented with specialized STEM education that is incomparable to the basic general education that they receive in school. We reach out to students and the community by visiting schools in-person, making appearances with our robots at street fairs, being broadcasted on the news, newspaper releases, and social media.

- Explain how the project contributes to and/or impacts the community.

Our team impacts the community in a number of ways. For one, we have been drawing interest to the STEM field for years. As we gain traction in the community, people are becoming more and more aware of the power of science, math, engineering, and technology. We specifically reach out to women and girls, and encourage them to explore their interests in STEM. Our Outreach efforts have reached over 85 girls in the past year alone; a number which is rapidly expanding. We are setting a precedent for teams that follow in our footsteps. We have and will continue to draw attention to STEM and to foster excellence and growth in science education. The students that we educate and inspire go on to create our futures. With what they have learned just in high school, we have provided students with all they need to achieve their dreams in STEM.

- What are the goals of the project? What methods will you use to achieve the objectives?

By providing a platform for all students regardless of age, race, social standings, or economic backgrounds and encouraging more girls to get involved in STEM education we hope to be able to promote STEM throughout the community. We mean to accomplish this through our rookie training program, Geared Learning, support from our expert volunteer mentors, and by

maintaining the only full sized metal shop in our district, as well as deeply immersing veteran members in the STEM field of their interest.

- Outline the key staff and volunteers' qualifications and experience critical to the project

Team Paradox is completely student-run. We function like a business, with different levels of leadership and a branch structure that allows us to function in an organized manner. The five main leadership positions are as follows: Team President, Engineering President, Marketing President, Operations President, and Outreach President.

Each of the four other branches are headed by one student. Each student in charge is either a Junior or a Senior, and has 2-3 years of leadership experience and extensive branch-specific knowledge. Executives are elected by a whole-team vote, and serve for a year, until they are elected to serve another year, graduate, or step down from their position. The following are this year's executives: Brian Titcomb (Operations, Senior, Sean Linden (Outreach, Senior), Elliot Varon (Marketing, Junior), and Wayde Gilliam (Engineering, Senior). Each of these students is extremely motivated and dedicated to our team's mission and goals, and has ample experience to support their passions.

- Identify other organizations and/or partners participating in the project and their roles.

Our student-run team is supported by our mentors' experience. These mentors are typically alumni of the team who have come back to help continue what they started 11 years ago. We also receive mentors from companies that sponsor us or from local companies that would like to get involved in this unique program.

- Provide a timetable for the project.

Our project is in effect year-round. Our build season lasts from January to Mid-February, and is followed by our competition season, which can last until late April. The final months of the school year are consumed by our election process and our annual Sponsor Appreciation Night. During the summer, students gather in small groups to plan for the year ahead and prepare for any new roles that they have assumed. During the fall, we educate our new team members through Geared Learning and mentor elementary school level robotics teams. By the time we have wrapped up Geared Learning, Build Season is right around the corner.

- Identify long-term funding resources for the project. How will the project be sustained?

Team Paradox is supported annually by various corporate and local sponsors. We rely on the support of donations, given that we are a non-profit organization. Aside from providing funds, or other material resources, our sponsors often provide mentors who work in STEM to help educate and provide aid to our students team members. Our sponsors include: Academy Skin Physicians, AFCEA San Diego, Chief Digital Advisors, The McCarthy Family Foundation, Nordson ASYMTEK, PCH Litho, Professional Insurance, Qualcomm, SAIC, Thomas C. Ackerman Foundation, ViaSat, Premier Stainless, Zodiac Pool Systems, The SDA Associated Student Body, and Accuer Inc., PLAYBOOK. Aside from local and corporate sponsors, we also receive support from individual donors, student, and parent contributions.

3. EVALUATION

- Describe the plan for evaluation. For instance, how will evaluation results be used and/or disseminated? Who will be involved in the evaluation?

The evaluation or our program and its effectiveness will be led by the five main leadership figures of the team but will still involve any interested team members. We will examine multiple variables, which include, but are not limited to: the growth of our sphere of influence, our performance at competitions, the number of new students retained in the program, and student testimonials. If we see appropriate growth in these areas, we will know that our program has been effective. If not, we will take the appropriate measures to correct our mistake(s). Results of our evaluation and details of the new measures we may take will be sent either in the mail or by email (depending on preference and connection) to our sponsors, along with financial statements and any other necessary or required materials.

4. ATTACHMENTS

- Copy of the current IRS determination letter indicating 501(c)3 tax-exempt status.

- List of Board of Directors including affiliations, tenures, and terms. What percentage of the Board of Directors financially supports the organization?

- Annual Report (if available).

- Organizational financial statements: financial statements from the last two (2) fiscal years (audited if possible) and current operating budget for the organization (expenses and income).

- Project financial statements: two-year project budget (expenses and income).

- List of other funders and/or potential funders and amounts committed or requested for the specified project.