

Chairman's Award - Team 1902

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2018 - Team 1902

Team Number

1902

Team Name, Corporate/University Sponsors

Lockheed Martin/Magnus Hi-Tech/State of Florida/United Therapeutics/Comcast NBC Universal/BAE Systems/Disney VoluntEARS/Stage Equipment and Lighting/Cannon Law/Castle Ventures/Central Florida Chapter Fluid Power Society/Elise Cronin-Hurley Web & Graphic Design&Orange County 4-H, Florida

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

-100% of EB students have pursued a higher education, utilizing learned technical skills & have landed jobs at Fortune 500 companies like Microsoft & Apple. -EB students present at many professional conferences, gaining valuable soft skills. -EB students pay forward the opportunities they have been given to future generations by mentoring EB & other teams, volunteering at FIRST events, & creating the official FTC Inspection App. -56% of current EB students competed in/mentor FTC & FLL teams.

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

-Long lasting relations with organizations such as the Science Center, Library, Maker Faire, & Kennedy Space Center allow us to build a community that celebrates STEM. -EB's enduring partnership with Orange County 4-H created a K-12 pipeline of 4-H FIRST teams for FL youth. -5500+ EB student volunteer hours through 200+ demos since 2013 to attract new audiences to FIRST; as a FIRST in FL Blue Ribbon Showcase team, we exhibit at conferences such as the CXO Exec. Summit, DMC, & I/ITSEC.

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

How we #MakItLoud: -Facilitate STEM education in underserved communities, by creating & sending 93 reusable Spark science kits to 32 countries. -Capture the attention of far-reaching audiences with our unique pig on a rocket brand. -Countless impressions through 5 websites & 12 social medias for our team & programs. -Spread FIRST with new audiences through our #FIRSTLikeAGirl media campaign, including 7 Fortune 500 companies, numerous media outlets, & STEM & youth organizations.

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

-EB created #FIRSTLikeAGirl, a platform where anyone can become a relatable role model; 12 EB members made #FIRSTLikeAGirl videos, empowering girls to be confident. -Our students volunteer thousands of hours, assisting & mentoring 51 FIRST teams & volunteering at FIRST events of all levels. -EB students have independently innovated tools for the FIRST community such as the official FTC Robot Inspection app & an FRC simulator. -We host workshops in Robots, Awards, & NEMO to help other teams.

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

-Provided sustainability techniques to 200+ teams who attended our 24 Imagery & Marketing workshops, 7 of which were held at World Champs. -Supplied Exploding Science Resource books to over 800 unique teams (many rookies) in the last 3 years, sharing entrepreneurial techniques. -As a 4-H team, EB provides a model for other community-based teams. -In the thousands of hours of community volunteering, we consistently encourage people to start teams & connect them with local FIRST reps.

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

-Presented at the UCF Teachers Demo, sharing FIRST with teachers in training inspiring them to start new FIRST teams -Shared our Imagery & Marketing wksp at the FLL Coaches Conference, promoting sustainability -Host annual STEM summer camps, introducing 8-12 yr olds to FIRST prompting many to join/create FLL teams -Our website FIRST Alliances promotes communication within FIRST & has specifically been utilized to connect people in the community looking to start new teams with those who can help.

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

-This year, we have assisted 29 FRC, 3 FTC, 3 FLL, & 2 FLL Jr. teams & we have mentored 3 FRC, 2 FTC, & 7 FLL teams. -We promote the progression of FIRST programs by hosting, running, & volunteering at FRC kickoffs, FLL Events, & FLL Jr. Expos. -EB students developed FIRST Alliances to be a website for all levels of FIRST that connects FIRST teams with experienced teams & helpful resources. -#FIRSTLikeAGirl encourages girls in FLL/FLL Jr by bridging the gaps between FIRST levels.

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)

-We mentor through video calls, emails, direct interactions, & Behind the Lines, an FRC YouTube show to share our knowledge & experience. -FIRST Alliances connects experienced FIRST teams of all levels with less experienced teams as they display resources, collaborate on programs, & seek guidance. -Our new #FIRSTLikeAGirl Ambassador program diffuses the campaign throughout the world, helping other FIRST teams make an impact in their own community & encourage the younger levels of FIRST.

Describe your Corporate/University Sponsors

-We maintain long term corporate sponsors like Lockheed Martin, Comcast NBCUniversal, BAE Systems, & Disney, while also actively developing new relationships with companies like United Therapeutics & NVIDIA. -By pursuing a variety of corporate, small business, & community partnerships we lessen the risk of not funding a season. -4-H provides a strong foundation for EB connecting a traditionally agricultural youth development program to robotics, exposing new audiences to FIRST & STEM.

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 sustainability requires a diverse sponsor base. Our partnerships consist of in-kind donations & monetary funding, sustaining our team. -We continually send updates, host an annual sponsor dinner, & represent sponsors on our team shirts, robot, pit, & website. -EB attends numerous corporate & professional conf. through our sponsors to represent both them & FIRST. -EB turns sponsors into FIRST advocates as they host events such as FLL competitions, expanding the reach of FIRST beyond EB.

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

-FIRST is the most unorthodox method of teaching a student how to make an impact in the world. Engineering principles are taught in a fun, time-intensive, & creative way. Building a robot in 6 weeks is no easy task, but inspiring an entire generation of innovators is significantly more difficult & impactful. FIRST somehow manages to be different than any other program, encouraging students to gain confidence to pursue any future profession with the support of a second family. -FUN!!

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

-Our Annual Strategic Planning meeting allows us to reevaluate our team, SWOT, mission statements, growth, and goals. -Our goal is to provide a team model that can be successfully replicated in any environment from the remote regions of the Netherlands to the dense areas of Michigan. -Connected with organizations and teams from 50+ countries through #FIRSTLikeAGirl -Partnered with 24 international FIRST teams to distribute & translate Spark manuals -86% female BOD -#TogetherWeInspire

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

Ruhika Lankalapalli

Essay

Since 2006, 4-H Exploding Bacon (EB) Team 1902 has been a rocket of inspiration, transcending boundaries while staying true to the goals & values of FIRST. We spread our message by turning our ordinary resources into extraordinary impact with far-reaching initiatives: #FIRSTLikeAGirl, Spark, & FIRST Alliances. EB is changing the culture, expanding FIRST, & propelling the next generation by igniting a passion for STEM, creating a platform of sustainability, & forging partnerships, so #TogetherWeInspire.

Ground Control

Although our diverse crew of 34 students from 5 Central Florida counties spans a vast area of 2,200 sq. miles, our students forge strong relationships, gathering at our build space for game nights & team dinners. These lasting, tight-knit bonds drive the alumni of EB to support the FIRST community by volunteering at events, mentoring teams, & establishing FIRST Alumni Clubs at UCF, UF, & ERAU. The core of our mentor team is the college alumni who dedicate thousands of hours a year to our team and FIRST. The combined energy of our students, mentors, & alumni promotes personal development & strengthens our family atmosphere.

Our annual strategic planning meeting serves as a launchpad for our future, enabling us to set and accomplish goals such as funding a practice robot, revitalizing our team leadership structure, expanding our international outreach impact, & acquiring a build space. As a team not affiliated with a school, students must actively fundraise & participate in grant writing year-round to meet our financial needs.

EB partners with companies & community organizations to expand our reach & unite them with the values of FIRST. By forging & maintaining these partnerships through sponsor dinners, company demos, & volunteering alongside their employees, we dramatically increase the scope & impact of our efforts. With 4-H, an international youth development organization, EB reaches out to students who wouldn't otherwise have access to an FRC team; half of EB students are homeschooled, & half come from schools without an FRC team.

Local Outreach

EB actively works to continue our outreach legacy & strong community presence by demonstrating a passion for FIRST with over 5500 student volunteer hours since 2013. We give back to our local corporate partners by collaborating on outreach events such as the 2017 4-H National STEM Day with Lockheed Martin & our 2017 Hack-A-Thon with Comcast NBCUniversal Media Tech. EB has worked directly in our community by hosting NXT robot summer camps since 2012, collecting supplies for several shelters across Central FL after our devastating hurricanes, & collaborating with the UCF College of Engineering to engage at-risk high school students in the Boys & Girls Club of Central FL. We were one of three FRC teams invited to represent FIRST with two of our robots at the 2017 Defense Manufacturing Conference (DMC), where FIRST Founder Dean Kamen presented as the keynote speaker. We also coordinated with Comcast NBCUniversal to invite FIRST President Don Bossi to the CXO Executive Summit as a keynote speaker on the topic of FIRST as a STEM pipeline. We are grateful that Mr. Bossi accepted & gave EB members the opportunity to present alongside him. Events such as TEDx, I/ITSEC, A3, CXO Executive Summit, & DMC enable us to reach large corporate & international audiences that may not have encountered FIRST, while local events such as Dreamflight, Maker Faire, UCF Engineering Day for the Boys and Girls Club, & Otronicon provide opportunities to strengthen our relations with Central FL, spreading FIRST across FL.

Image

Our bright orange & green robots, intriguing name, & iconic pig on a rocket logo have gained interstellar recognition throughout FIRST & our local community. With 4 Regional Imagery Awards, the 2013 World Champs Imagery Award, & countless awards from our peers, we deployed our experience to help other teams with their sustainability by creating the Big Bacon Theory of Image & Marketing workshop (BBTIM). BBTIM teaches FIRST teams how being memorable impacts fundraising & recruitment efforts. These activities are core to sustaining all teams, which is why we adapted the workshop this year to target the needs of all FIRST levels & presented at a FIRST Lego League Coaches' Conference. We have presented it 24 times, 7 of those at World Championships.

Spark

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EB students created Spark Science Kits in 2014 to expand access to hands-on STEM education by sending reusable kits filled with simple materials to children in areas with few resources. In the last year, we have expanded our program by 542% with a total of 86 kits to 32 countries. When we attended the 2017 Bayou Regional, several volunteers were impressed with Spark & connected us with Tulane University, who utilized 15 kits for teachers who work with at-risk students. In the Summer of 2017, an EB student took 6 kits to India & sparked interest in numerous public school children. She said, "These kids were all so smart, but they just don't get the resources they need to learn. After only an hour of the activities, their outlook dramatically changed. Spark broadened their ambitions towards becoming scientists, engineers, and architects." In July 2017, a group of EB students traveled to Washington D.C. to support the teams participating in the FIRST Global Competition. We collaborated with attending teams to send 27 Spark kits to 17 countries. In addition to taking kits back home, several FIRST teams at multiple events have worked with EB, translating our Spark instruction manuals into 5 languages. Countless letters, pictures, & videos from the students & educators impacted by Spark motivate our students to continue fundraising, building kits, & inspiring the next STEM leaders. From the government schools of India, to the orphanages of Haiti, to at-risk students in New Orleans, Spark is creating the next generation of problem-solvers around the world.

#FIRSTLikeAGirl

In early 2016, we launched our #FIRSTLikeAGirl social media campaign to showcase what women are accomplishing throughout FIRST & STEM organizations. This international program features the stories of female role models to empower young girls to be more confident in STEM. We have expanded our program by 418% since 2017, sharing 57 videos of students, mentors, & alumni, & gaining more than 2,500 followers from 50 countries across our specialized #FIRSTLikeAGirl social media. Beyond the many FIRST teams following our #FIRSTLikeAGirl social media accounts, multiple Fortune 500 companies, media outlets & several Global STEM organizations have embraced the message with retweets & tags. We met with female executives from various Comcast NBCUniversal media & tech departments, discussing a collaboration with #FIRSTLikeAGirl to make a larger impact. Our goal is to provide a platform to give girls in FIRST a voice, helping them #MakeItLoud. The positive feedback from the younger FLL & FTC girls has proven that #FIRSTLikeAGirl bridges the gap between programs & encourage girls when they need it most. An 11-year old sibling said, "If you can find something that you can relate to or that just inspires you, you can go a whole lot further in life. #FIRSTLikeAGirl did so much for me in that way."

FIRST Relationships

EB regularly shares robot, marketing, strategy, awards, & fundraising resources, including our Exploding Science Resource Books, with the FIRST community through our social media, websites, email, & workshops. This year, we are assisting 31 FRC, 3 FTC, 3 FLL, & 2 FLL Jr. teams & mentoring 3 FRC, 2 FTC, & 7 FLL teams. We promote the progression of FIRST programs by hosting & running FLL Jr. Expos, FLL Events, & FRC kickoffs. Our Spark program has provided an outreach trajectory for the 38 FIRST teams that took kits home to their countries, changing curriculum in local school systems, orphanages, & Turkish refugee camps. Many teams across the global FIRST community are embracing our #FIRSTLikeAGirl program, constantly asking us how they can do more, which inspired us to create our #FIRSTLikeAGirl Ambassador Program. Our ambassadors have made this campaign their own by making buttons & signs at their home regionals, thereby changing the culture in their own countries. As we strive to build stronger relationships, we develop a more united FIRST community of sustainable teams that support each other.

FIRST Alliances

We found the potential for growth in our own programs through collaboration with other teams, which inspired us to create a platform for all levels of FIRST "changing the way FIRST teams interact for the better" (FRC 180). The combined impact of the 400,000+ students in the FIRST community is an unstoppable force that has the power to change the culture & #MakeItLoud. EB created FIRSTAlliances.org to foster connections that enable this type of worldwide impact. It is an online directory of FIRST teams that highlights their strengths, promotes their initiatives, & provides a place for collaboration. In addition to planning & managing the marketing & social media of FIRST Alliances, EB students built the program from scratch, coding & developing the website in Python. We launched our beta in December 2017 & already have 100+ teams spanning all levels of FIRST.

#TogetherWeInspire

The ultimate resources in FIRST are the teams, students, mentors, & alumni who inspire everyday. Exploding Bacon's strong core of members blast off by expanding FIRST, changing the culture, & inspiring the next generation. Spark provides opportunities for hands-on exploration, #FIRSTLikeAGirl creates the opportunity to empower one another, & FIRST Alliances unifies the efforts of FIRST teams around the world. Exploding Bacon works tirelessly to create a distinct impact, leaving a legacy of global collaboration, education, & inspiration so that together we continue to make the biggest boom; #TogetherWeInspire.