

Chairman's Award - Team 2834

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2018 - Team 2834

Team Number

2834

Team Name, Corporate/University Sponsors

FCA Foundation/General Motors/thyssenkrupp/Magna/Ford Motor Company/PTC&Bloomfield Hills High School

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

The 2834 experience goes beyond robots. We provide opportunities for students to learn, fail and grow in a caring, supportive community. Team 2834 aims to develop students who inspire their peers and community with empathy and ethics. Through event hosting, our TV show, community service work, and numerous STEAM projects, students practice all aspects of leadership in addition to problem solving, collaboration, new media, entrepreneurship, political advocacy and applied engineering.

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

Each year we offer weeklong FLL, FTC, & free Girls STEM summer camps which showcase all levels of FIRST. Our unique school partnership makes FIRST robotics as common as swim lessons. We demonstrate our robot & enthusiasm for FIRST at schools, parades, and our hosted events, and serve through Life Remodeled, Operation Good Cheer and Orchards Bike Build. We have inspired dozens of adults to join us as event judges, volunteers, or full time mentors, many having no previous exposure to FIRST.

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

We are bringing FIRST to completely new audiences. Our 100% student produced / filmed / edited cable TV show, Full Steam Ahead, illustrates FIRST concepts thru innovative labs and expert interviews. It is viewed in schools, on community cable TV reaching 28,000 homes, and worldwide on youtube. For a second year we partnered with a local working farm to apply the engineering and robotics skills we've learned in FIRST to solve real-world agricultural challenges.

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

We run 6 FIRST events annually including the original FIRST in Michigan FRC Girls Tournament, now in its 5th year. This year we enhanced the event by adding two technical webinars to prepare girls for leadership roles in the upcoming season. 2834 also presented two workshops at the World Championships: "Data Driven Decision Making" and "School Partnership", reaching 400+. We continue to focus on Detroit by partnering with Michigan Science Center to run an annual summer FLL robotics camp.

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

We assist FIRST in Michigan to reach school districts, host demos and lead workshops about starting & sustaining FRC teams. We provide on-site mentoring, webinars and have recently started a 2834 Website Robot Garage of free parts. We specifically helped launch Hazel Park FRC 7224. We demonstrated our robot and talked to kids enabling them to form a team who came to our kickoff. We consistently work with 7224 to develop their strategy, assist with robot build and all aspects of team formation.

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

Our school partnership enables us to share FIRST with 100% of BH students. Our innovative approach lists FIRST Robotics on our Rec Dep. website. We match students to teams, recruit mentors, register teams with FIRST, organize all materials, conduct coach training & provide help desk sessions. This year alone in Bloomfield schools, we organized 45 teams & over 325+ students in FIRST and also helped launch FLL & FTC in Hazel Park.

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

We inspired 1000+ students and hundreds of teams at our 2017 events. We strive for an amazing experience, including demonstrating all FIRST levels so kids & parents build awareness, develop contagious enthusiasm, have fun, & stay involved with FIRST. Our school partnership created a progression model supported by camps, demos, parent education and mentor training. Our 8 FTC and FRC team share practice space resulting in camaraderie and excitement. Everyone wants to be a Black Hawk!

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 work with all the FIRST teams in our district to execute a mentoring model that includes 2 week-long camps, adult mentor training, workshops, and embedded student mentoring. Team 2834 members mentor our 8 FTC and 14 FLL teams weekly supporting build, strategy and programming, accounting for 1000+ mentor hours this year alone. At our FTC kickoff we trained 22 teams on the FTC Control System and PTC Creo. We are adding a "Step-Up Day" for students to learn about Team 2834 before high school.

Describe your Corporate/University Sponsors

We are grateful to original sponsors FCA & PTC who continue to support us! Other sponsors such as GM, ThyssenKrupp, Magna, Ford, HBL and Ralco provide funding and dedicated mentors. Bloomfield Hills Schools demonstrates their commitment to FIRST by providing working space for our rapidly growing program. We placed emphasis on grant writing and received a \$1000 industry grant from Precision Metalforming Educational Foundation.

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

We partner with sponsors to grow FIRST. We were "2017 GM Team of the Year" This award celebrates "great examples of successful GM teams." We participated in a "GM Cares event" presenting our robot and inspiring GM Employees to become FIRST mentors. We were invited to Magna Powertrain where we demonstrated our robot and inspired 70 employees about FIRST and how they could start teams in their communities. We also partnered with Magna and the RoboStangs at a summer camp event teaching leadership.

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

FIRST is students, parents & mentors working together to inspire the world. It's creating a robot, learning life skills, and practicing leadership. It's taking risks and learning from your failures. It's a community of compassion and integrity. FIRST is serving others: teammates, mentors, community & the FIRST world. It's growing as a team & as individuals. Not only are we building robots, we are building better people. It's creating many "FIRST" in your life, memories to last a lifetime.

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

As one of the largest FIRST programs and the 2017 MI State Chairman winners, we are FIRST ambassadors and strive to demonstrate excellence and enthusiasm with empathy. We continue to innovate new ways of spreading FIRST. From our cable TV show, to our school partnership, to hosting events, to applying FIRST skills at the farm, to our newest venture-the Robot Garage, making parts available to teams with limited resources. We develop students that will inspire their peers and change the world!

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

Alexandra Bosoc

Essay

OUR GUIDING FORCE - INSPIRATION IS OUR BUSINESS

We are Team 2834, celebrating our 10th season, and inspiration is our business! FIRST provides opportunities for our students to learn, collaborate, take risks and serve others. We have numerous cultures, perspectives, skills and beliefs; all of us have been impacted by FIRST and we want to inspire others to join us and have the same great experience.

SETTING GOALS and SOARING HIGHER

As one of the largest FIRST programs and recipient of the Michigan State Chairman's award the past two seasons, we focused this year more than ever to help other teams. We assisted FIRST in Michigan to reach new school districts, and led the matching of all rookie teams in Michigan with experienced teams to guide them. We mentored the Detroit rookie quick-build, and our students helped launch Hazel Park FRC 7224 by demonstrating our robot in their school, and helping sign up their founding students. We continue to support Hazel Park through the strategy, build, and competition phase. We created the "2834 Garage.com" website this year to share extra parts to new and growing teams.

We added an FTC Kickoff to our list of hosted activities, and improved the Bloomfield Girls-only FRC event by adding two technical webinars to prepare girls for the leadership roles in the upcoming season.

We continue to share our published resources, especially the Team 2834 Scouting Database that contains statistics on every team in FIRST, as well as our World Championships presentation, "Know Your Opponent - Data Driven Decision Making".

Internally, we introduced a student badging process to document student skill levels and renewed our commitment to FIRST ideals by refreshing our ethical code of conduct.

HOSTING EVENTS - MAKING FIRST FUN - INSPIRATIONAL LEADERSHIP

We run 6 FIRST events annually, working to make our events an amazing experience for the 1000+ students that attend. No matter if it is FLL Jr, FLL, FTC or FRC, we want all kids to have fun and come back for more! We make sure to demonstrate all levels of FIRST to build awareness and inspire students and families to stay involved with FIRST.

Hosting events gives the Black Hawks opportunities to lead with passion, collaborate as a team and give back to FIRST. Our Fall and Spring FLL Jr Expos are completely planned and run by 2834 students. The FLL State Championship requires months of preparation, involving all 42 student Black Hawks who serve as refs, scorekeepers, and field managers, to name a few. We hosted the FTC Kick off where Team 2834 students led workshops for younger students in CAD, Programming and Strategy. The FRC Bloomfield Girls Robotics Competition provides opportunities for FRC girls from 32 teams to gain hands on robot and pit experience in a friendly, encouraging atmosphere. Finally, our FRC Kick off is a time to meet new FRC teams and provide assistance as they kick off their season.

Through our events we have also gained many new volunteers to FIRST, many without any previous exposure to FIRST. We are honored to host and run all 6 events to make FIRST Michigan one of the most successful programs nationally!

INSPIRING OUR SCHOOL DISTRICT IN PARTNERSHIP

Four years ago, we formed a partnership with our school district to spread FIRST to all who wanted to participate. We list FIRST Robotics on our Rec website, use the school listserv to communicate about FIRST, and have school sponsored practice space. As a result of our partnership, 100% of BH students know about FIRST, we have FIRST teams in every school and at every level. Joining FIRST is as easy as taking swim lessons. Following registration, our team organizes students into teams, recruits and trains mentors, registers teams with FIRST and orders all materials. This year in Bloomfield Hills Schools, we created 45 FIRST teams made up of 330 students, one of the largest programs in Michigan.

We were proud to share our School Partnership Model approach in a presentation at the St. Louis World Championships.

FIRST PROGRESSION OF PROGRAMS IN BLOOMFIELD

The mentoring of students, parents, and coaches is a key component of our approach. Team 2834 students serve as mentors to our 8 FTC & 14 FLL teams, joining them weekly for programming, build, strategy and more, resulting in over 1000+ mentor hours. We host week-long FLL and FTC camps, and numerous demonstrations and parent meetings to manage the progression of students and teams to the next level. We share our practice space with all of our FTC teams. This year we are adding a "step-up day" for 8th grade FTC students to learn more about the Bionic Black Hawks and be ready to join us in the offseason before they get to high school.

INSPIRING GIRLS

One of our strategic directions is to create opportunities for girls to explore STEAM. We have hosted the Bloomfield Girls Robotics Competition for 5 years, this year reaching 32 teams. The proceeds from the tournament fund 5 college individual \$1000 scholarships for senior girls. Following this innovative approach, other teams have begun to host their own girls-only competitions. Students from other teams have responded that the Bloomfield Girls event is one of the best FIRST experiences they ever had.

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Every year we host Girl Scout events complementing our competitions, and join with FRC 772 Sabre Bytes at the International River Crossing where over 3000 girls from the US and Canada have been inspired by our robot demo and learn about gear ratios. Over the summer our FRC girl counselors organize FREE girls-only summer camps. With about 50 girls in attendance each year, participants learn math, physics, and chemistry through experiments and crafts.

UNIQUE METHODS FOR SPREADING FIRST

We find innovative and creative ways to spread FIRST. One way we inspire is through our innovative cable TV Show, Full Steam Ahead. Based on teacher input, we bring STEAM to elementary school students through creative labs, fun experiments, and learning about STEAM professions. The show is 100% student produced/ filmed/ edited and is viewed in schools, on community cable TV reaching 28,000 homes, and worldwide on youtube. Each episode ends with a quiz question that draws students to our robotics team website, with the lucky winner receiving a prize and visit to their classroom from our team, allowing us to further introduce FIRST robotics to the younger grades.

Another unique partnership we developed is with Bowers School Farm, in which Team 2834 students apply their learnings from FIRST to real world agricultural engineering. Last year the team built a chicken coop door using the same sensors and motors used on our FRC robots. This year we'll be creating an automatic piglet feeder. These projects are important in helping our students see the application of FIRST and STEAM beyond high school robotics.

CORPORATE SPONSORS- INSPIRING OTHERS TO CONNECT TO FIRST

Our goal is for our sponsors to understand FIRST and connect as mentors and volunteers. As an example, our newest sponsor ThyssenKrupp was inspired by our team to share FIRST's vision with their global headquarters with the goal of starting teams in Germany.

We were chosen as GM's, "2017 Team of The Year," at the World Championships. This award, celebrates "great examples of successful GM teams." As recipients of the award we were invite to participate in a "GM Cares" event. We, along with other GM sponsored teams, demonstrated our robot and talked to GM employees about our experience with FIRST with the goal of encouraging GM employees to help start and mentor FIRST Teams. Magna, a first year sponsor, invited us to demonstrate our robot and discuss FIRST to over 70 employees. We raised their awareness of FIRST and encouraged them to start FIRST teams in their community. We also toured the Magna facility to learn more about Engineering and Manufacturing. Finally, we partnered with Magna and the FRC 548 Robostangs, to run a one day leadership event where over 100 middle schooler's participated and learned about team building and FIRST.

FIRST IMPACT - INSPIRING OUR COMMUNITY

To improve understanding and generate excitement about FRC and FIRST, our team demonstrates our robot at local schools, parades, and events. New this year we demonstrated our robot to a huge crowd at a home football game and sold "Bot Brew" (soda) to raise funds for Operation Good Cheer, a holiday wish program for foster children in Michigan.

Also new this year, we provided a demonstration at the Metro Parent magazine annual expo where we introduced 1000+ attendees to all levels of FIRST.

In the past two years we helped renovate homes in Detroit through Life Re-Modeled, built bikes for kids, and served at a local food bank.

ADVOCACY - INSPIRING WASHINGTON, LANSING AND LOCAL GOVERNMENT

Over the last 3 years, our team has joined with others to promote FIRST within the federal, state and local government. Last June, five team members attended the FIRST National Advocacy Conference in Washington DC to advocate for funds to supplement state STEM programs through Title IV Part A of ESSA. In May, two team members participated in the Michigan Advocacy Conference in Lansing where they discussed the benefits of FIRST and asked representatives for their continued support of FIRST funding in Michigan. The Black Hawks met locally with Rep. Brenda Lawrence and Rep. Mike McCready (who also attended our FRC Kick-off).

THE BIONIC BLACK HAWKS ARE INSPIRED

The Bionic Black Hawks work year-round to ignite students' passion for STEAM with continued respect for FIRST values. Our team builds self confidence as we overcome challenges with teamwork, determination, and in an environment that values risk-taking and learning. We believe "Inspiration is our Business" as we dedicate ourselves to bring a high quality FIRST experience to students, volunteers, mentors, sponsors, and friends. FIRST has inspired us to master new skills, expand our horizons, and become better people.