

## Chairman's Award - Team 1468

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2022 - Team 1468

**Team Number**

1468

**Team Nickname**

Hicksville J-Birds

**Team Location**

Hicksville, New York - USA

**Describe the impact of the *FIRST* program on team participants within the last 3 years. This can include but is not limited to percentages of those graduating high school, attending college, in STEM careers, and in *FIRST* programs as mentors/sponsors.**

Providing skills like public speaking and leadership, the J-Birds have prepared members for careers ranging from theater to engineering to business. With 98% of the team crediting FIRST as having an impact on their future, 99.7% graduate moving on to a 2 or 4-year college program, with 87% pursuing STEM. While some members currently work on projects such as the Hyperloop, each graduate continues to apply the core values of FIRST in their respective fields with 40% returning to mentor.

**Describe your community along with how your team addresses its unique opportunities and circumstances.**

Living in a community full of diversity, 40% are economically disadvantaged. The J-Birds prioritize breaking financial barriers and opening doors for those interested in STEM from underprivileged areas. Persevering through the fight against funding, our team founded a Robotics Booster Club which has allowed us to dedicate a scholarship for students furthering education in STEM and assist local populations in the greater Nassau County area by providing clothing, food items, and hygiene products.

**Describe the team's methods, with emphasis on the past 3 years, for spreading the *FIRST* message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?**

Adjusting to the pandemic, the J-Birds continue spreading the FIRST message by leveraging social media platforms like Instagram & Youtube. Not only has it allowed us to stay connected with our pre-established community but also reach new audiences through initiatives like helping Girl Scouts earn their robotics badge. Branching out to many communities, there is a push to help establish a double-accelerated STEM curriculum surrounding the FIRST educational programs due to the increased interest.

**Please provide specific examples of how your team members act as role models within the *FIRST* community with emphasis on the past 3 years.**

The J-Birds embody values of community outreach. During COVID, with the shortage of PPE, the J-Birds 3D printed 1000+ face shields for hospitals. Nationally recognized on the news, local FIRST teams reached out to help. Utilizing their own machines, teams imprinted their impact in the community through their PPE distribution, inspired by the J-Birds. Our FLL teams aspired to continue the impact and distributed snack bags to healthcare workers. Together, we uplifted each other making a difference

**Describe your team's initiatives to Assist, Mentor, and/or Start other *FIRST* teams with emphasis on activities within the past 3 years.**

As a part of the Gold Coast Alliance, a collaborative group of FRC teams on Long Island, we have assisted local teams by providing parts, guidance, and also leading engaging discussions. Within our district, the J-Birds have created 3 FLL Challenge teams over the past 7 years and set plans to start 7 FLL Explore teams at the elementary level (on hold due to COVID). Additionally, we have teamed up with FTC Team 11128 to form Agnite, in order to start 3 FLL Challenge teams in India and Nepal.

**Beyond starting teams, what initiatives have you done to help inspire young people to be science and technology leaders and innovators? What results have you seen from your efforts in the past 3 years?**

When our FLL teams brought the idea of equitable access for wheelchair users on the Long Island Rail Road, we helped them in meeting with LIRR directors to present a proposal and create a prototype. By widening their perspective, the idea moved forward with a proposal to begin implementing similar devices for better accessibility. By inspiring our FLL teams, we taught students across our community the ability to make a difference - to combine their creativity to become this generation's leaders

**Describe the partnerships you've created with other organizations (teams, sponsors, educational institutions, philanthropic entities, etc.) and what you have accomplished together with emphasis on the past 3 years**

With sponsors like BAE Systems, Zebra, Festo, Northrup Grumman, and the U.S D.O.D, years of collaboration have let us form bonds with engineers in different industries who guide us as mentors. We were immersed in coding and electrical workshops under our BAE Systems mentor. To show our gratitude, we annually assist BAE Systems at SBPLI Regionals to organize their STEM showcase. These sponsors have given us access to paramount resources and we are proud to have them as a part of the J-Bird family

**Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, *FIRST*, and your communities.**

Founded by a female, the J-Birds have seen an increase in the involvement of women as our team now encompasses 40% of women, many pursuing male-dominated fields. The J-Birds promote a collaborative environment by including special needs students who can develop technical skills, and further apply them outside of *FIRST*. Composed of multiple ethnic minorities, the J-Birds don't let boundaries like language stop us with a greater number of ENL students actively participating alongside translators.

**Explain how you ensure your team and the initiatives you have created will continue to run effectively for the foreseeable future**

By tradition, younger members are introduced to the aspects of the team with an opportunity to specialize in subsections like business, electrical, and mechanical. Veterans who serve as "leads" for subsections, explain the specific components, along with creating their own "Bird Guide" providing various resources. As the new members shadow the veterans with alumni returning, we create a cycle allowing for the continuous progression of the team, building upon the knowledge from over 18 years.

**Describe your team's innovative strategies to recruit, retain, and engage your sponsors within the past 3 years**

The creation of our 501(c)(3) Booster Club allows us to recruit new sponsors and engage with companies looking to invest in the future of STEM. We maintain connections with alumni by allowing them to make donations. We retain our sponsors through monthly newsletters, social media posts, meetings, and restaurant fundraisers. We engage our sponsors through community events such as parades and local showcases, where we display our work, promote our sponsors, and recruit other intrigued businesses.

**Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.**

Though we have accomplished plenty with our basic power tools and limited resources, the benefit of newer technology such as CNC machines could bring for more efficient builds - allowing us to incorporate a more automated aspect of engineering for prototyping. In order to combat this, we've taken steps to receive sponsorships and presented proposals for improved funding and technology to reach our peak in craftsmanship. Even with minor setbacks, we look to maximize our strengths.

**Describe your team's goals to fulfill the mission of *FIRST* and the progress you have made towards those goals.**

*FIRST* has always been about people, with the robot just being the vessel that brings everyone together. We pride ourselves on our mission to serve underserved communities. We have formed Agnite, along with an FTC team to spread *FIRST* globally and share resources with teams who have similar agendas. We have confirmed the creation of 5 South Asian FLL teams with more on the way. By introducing cultural values and becoming interconnected, we aim to provide real-world experiences shaping the future

**Briefly describe other matters of interest to the *FIRST* Judges, including items that may not fit into the above topics. The judges are interested in learning about aspects of your team that may be unique or particularly noteworthy.**

We pride ourselves in our engagement within our school and the local community. During the holiday season, we adorn our lobby as a winter wonderland with Christmas, Hanukkah, and Kwanzaa decorations, being inclusive of each other's culture. At the end of every year, we volunteer to set up junior prom in our gym, help organize the school's annual play through building props for the theater, and volunteer at our local Senior Citizen Prom, sparking conversation between generations of people.

## Essay

### Stepping Stones

Founded in 2004, the Hicksville J-Birds Robotics team was built on the core principles of passion, curiosity, and innovation. It was a dream come true to join the FIRST community, a community far ahead of its time. Since then, one member at a time, the J-Birds nest has developed into an environment that embodies its original founding principles, as well as a checkpoint where the thinkers of tomorrow can flourish. The mission of Hicksville Robotics is to positively impact students and provide opportunities for STEM education. Starting from just a crew of 10 to a whopping average of 70-plus members each year, our program has produced engineers who are now at the forefront of technology at NASA, BAE Systems, Virgin, and the U.S. Department of Defense. Every time someone types their first line of code or crafts a successful prototype, it's the smile on their face that signals the start of their everlasting journey.

### A "Sea of Orange"

At school, everyone knows that Thursday is J-Bird day. Our signature bright orange robotics shirts with our J-Birds emblem fill the hallways and form the "Sea of Orange", as each member proudly wears their club attire. Our Sea is made up of an accepting family consisting of a coach, mentors, current members, and alumni who strongly believe that robotics is "more than just robots." Apart from dedicating over 200 hours into strategizing, prototyping, constructing the robot, members mature alongside team leaders and make their ideas come to life. Over a third of these members are alumni of our FLL programs and continue their new journey of FRC with ambition and anticipation.

Our robots hold a special place in our school community. With occasions like tossing an alley-oop to our principal to dunk the basketball at Pep Rally, or children catching balls thrown from our 2006 robot at Homecoming to win a goldfish, the J-Birds are recognized by children, parents, and school officials. We continue to create a fun and safe environment for all children by hosting an annual Safe Halloween event. With themes ranging from the Wizard of Oz to Frozen, we give life to fictional characters by decorating and building majestic wonderlands left to be explored in our school hallways. New members use this event as a chance to get accustomed to tools to build certain components and prepare them for our build season. Senior members of our team also help with the Nassau BOCES sponsored WINGS program at our school, an alternative night school allowing students to pursue their education if they typically work jobs during the day or have social anxiety issues. Senior members also spend late nights helping technology teachers by giving lessons in classes by demonstrating how to use power tools for a variety of woodworking projects. In conjunction with our school's Science Olympiad, we have organized booths and showcases for STEM outreach in Hicksville at our local Broadway Mall and other shopping centers. Additionally, we are seen at the annual Hicksville Memorial Day Parade where we honor Hicksville Military service members and connect with families as we march in the parade with our robots proudly on display. The "Sea of Orange" integrates our passion for robotics within our home to display the importance of STEM in Hicksville.

### Force for Change

As active members of the community, we recognize the strength in unity □ to be there for one another. Our coach Ms. Temps often quotes the movie High School Musical and chants "We're all in this together", a maxim our team lives by. Outside of the workshop, we have hosted walk-a-thons for Breast Cancer Awareness, the Boomer Esiason Foundation for Cystic Fibrosis, Autism Speaks, and the Sarah Grace Foundation. We particularly cherish our relationship with the local Sarah Grace Foundation for Cancer. Sarah was an 11-year-old Hicksville student who was diagnosed with leukemia and passed away after a long fight in 2002. The J-Birds have hosted annual walks for the Sarah Grace Foundation and recently helped create "Escape Hatches", arts and crafts kits, that are shipped to children in hospitals during the holiday season to give them activities while undergoing treatment. Furthermore, we apply our knowledge of tools and hand-fabricated 50 full-size Nok Hockey tables a year for the Marine Corps "Toys for Tots" charity while also giving upwards of \$1,500 in toys.

### Building Doors When Opportunity Doesn't Knock

Living during the time of the COVID-19 Pandemic, it has been difficult to even think about touching a robot. Being more than a Robotics team, we wanted to solve real-world problems in our local communities. During the height of the pandemic, our team was able to 3D print over 1000 face shields for medical staff in over 8 different hospitals on Long Island: NYU Winthrop Pulmonary Unit, St. Charles Hospital, White Oaks Rehabilitation, Northwell Health Hospital, and Nassau University Medical Center. Applying the technology and resources we had access to, we wanted to better the lives of frontline workers and give our gratitude. Reaching tens of thousands of people in the Tri-State area, we were featured on news channels including News12 and Fox News as the "Hero of the Day" for the impact we made. Eventually being contacted by the Nassau County Health Commissioner for additional help, we aided residents of neighboring towns by continuing our production of personal protective equipment and distributing PPE to many struggling communities during the pandemic. We were also recognized by Nassau County Legislators Arnold Drucker and Rose-Walker, as well as NYS Senator Kevin Thomas and Congressman Tom Suozzi, for our FIRST program and our dedicated service. Alongside face shields, we made and distributed over 2000 snack bags with inspirational messages to these same places to raise the spirits of many of the hardworking personnel.

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Additionally, before the pandemic, the J-Birds held a special connection with several Bristol Senior Assisted Living Centers, where we painted holiday ornaments with senior citizens and showcased our robot to them while doing other arts and crafts projects. However, with the pandemic, this tradition was disrupted. The J-Birds took this as an opportunity to effectively combine our critical thinking skills and senior citizen connections to design Aureum, a VR conferencing platform that would create intergenerational bonds between teenagers and seniors through physical activity. As a result, the J-Birds participated in the FIRST Innovation Challenge which aimed to use creativity and technology to improve physical and mental health within the community. Seniors and teenagers would be paired with similar fitness interests using Aureum's website and teenagers would be rewarded with incentives. As an international Semi-Finalist for the 2021 FIRST Innovation Challenge, as well as a recipient of the Altice Innovative Award Winner, our idea was successful in helping many of those in need. We reached hundreds of people and hope to continue the journey of Aureum as we are in the process of filing a patent for it. Although COVID-19 closed many windows, it had opened hidden doors that created solutions to real-world problems using the core values instilled in us through FIRST.

### Spreading FIRST

FIRST has provided the J-Birds with a plethora of opportunities that have paved the way for many older members. As a result, the J-Birds look to expand FIRST for everyone to be able to experience it. In 2015, an FLL sister program was created at our school district's middle school. This program has since expanded to 3 teams in which the values of Gracious Professionalism and Coopertition are engraved in the hearts of the young members. With two of our FRC team mentors being Woodie Flowers Award recipients, teamwork and inclusion have been integral parts of our team, emphasized by high schoolers mentoring middle school students. In the 2021 FLL World Competition, one of our mentored teams had truly broadcasted the values embedded in our team winning the Core Values Award. To continue reaching children of different cohorts, we are currently in the process of starting 7 new FLL Explore teams, which target local elementary schools. The J-Birds' desire to spread the passion for STEM is not only in younger generations but also in areas where people are not as fortunate to have the opportunity to participate in FIRST-related events. In collaboration with San Diego-based FTC Team 11128, Team Inspiration, we have created a program called Agnite: a student-run 501(c)(3) nonprofit organization that's helping to start FLL programs across South Asia. We are in the process of creating FLL teams for small schools in Nepal and India, where school officials are actively working to recruit members for the team. Bringing even one team to South Asia positively impacts several individuals who will make the most of this opportunity cascading long-lasting effects. In the meantime, we have been setting up transportation logistics to be able to ship LEGO EV3 Mindstorm robot kits and practice mats to spread FIRST in underrepresented areas. With the J-Birds sharing our FIRST experience, we are able to lead others to unique paths of solving real-world problems.

### The Future is Bright

In our 18 years of competing, we continue our pursuit to soar to greater heights and break through barriers that come in our way. Wanting to transform the future of STEM, our initiatives have allowed for members and alumni to truly understand what it means to be a part of FIRST robotics and to cultivate a global perspective. Having prepared students for careers ranging from business, engineering, to arts and design, the J-Birds engrain the importance of serving the community in everything we do. Our "Sea of Orange" that initially flows through the hallways of Hicksville High School, now spreads across the world's industries.