

OUTREACH

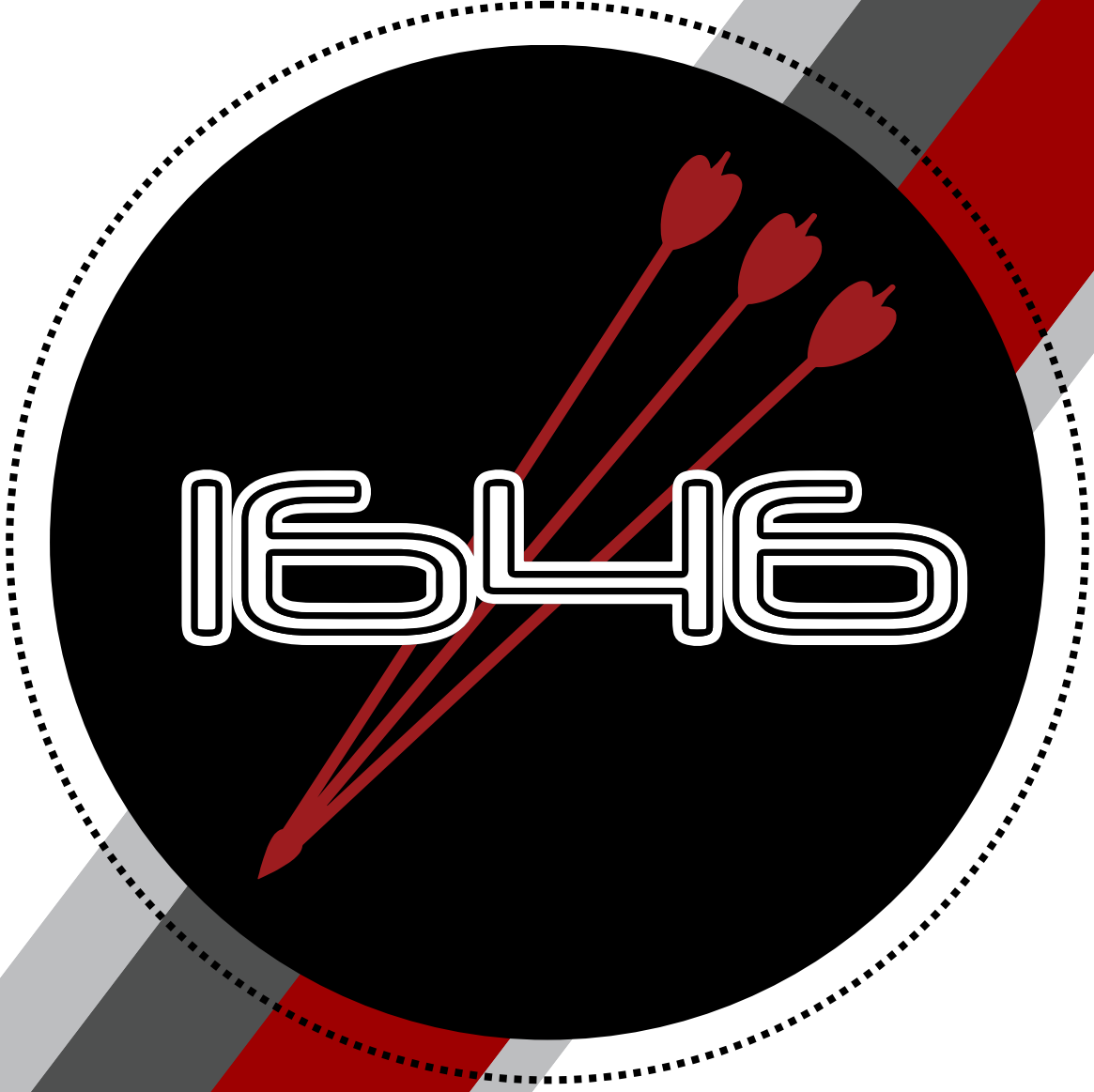


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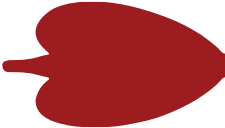
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VISION

THREE TENETS

These three tenets describe the defining objectives of our team. They are goals we strive for when engaging with others through outreach.

EMBRACE TECHNOLOGY



Our team provides memorable experiences with STEM for our team and the people we impact through outreach. The team believes our students can change the future of technology.

EDUCATE OUR COMMUNITY



We give many demonstrations of our robots and our design process at a variety of local events. Demonstrations inspire young children to engage in the same ideals as our team and FIRST.

EMPOWER THE WORLD



The team embodies the use of STEM to further our students' success and encourage them to solve global issues. No one person can change the world; FIRST helps students understand how to work as a team so they can change the world.



LEAVING AN IMPACT

BY THE NUMBERS

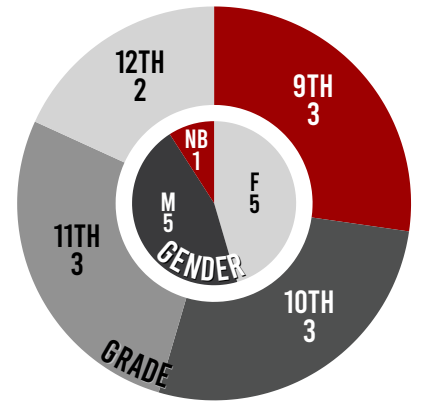


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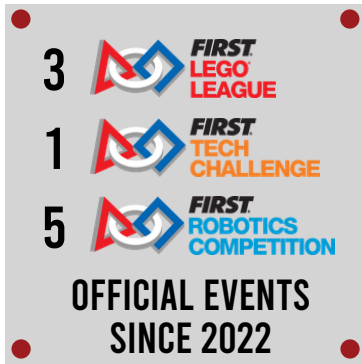
STUDENTS

91%

MINORITY



HOSTED



100%

GRADUATION RATE

91%

PURSUING STEM

6

NEW TEACHERS
RECRUITED TO FIRST



EXPANDED
TO GRADES 2-12

7/11

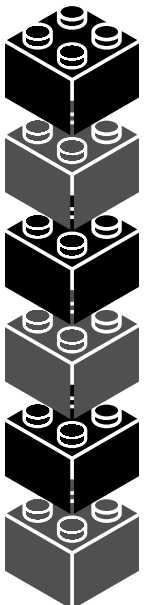
SCHOOLS NOW HAVE
A FIRST PROGRAM

\$86K

GRANTS FOR LSC
ROBOTICS PROGRAMS
IN 25-26

\$13K

IN OVERALL
SPONSORSHIP
FUNDING



\$25K

TARGETED FOR NEW
ELEMENTARY TEAMS

8

NEW FLL
EXPLORE TEAMS

54

STUDENTS NEW
TO FIRST

37%

OF 1646 STUDENTS
MENTOR FLL

15+

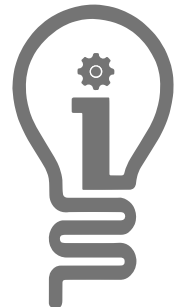
YEARS OF
PARTNERSHIP

3

EVENTS

300

PEOPLE
REACHED



Teamwork makes
the dream work

“IN” - REACH

FIRST is more than robots; it is also about benefitting and educating those around you. In alignment with our mission statement, we put a strong focus on the awareness of science, technology, engineering, and math in our community.

This community starts in-house at Jefferson High School before it can spread out into the Greater Lafayette community. As they say when you fly on an airplane, you must put on your oxygen mask first before helping others.

Since 2022, the team has made specific and dedicated effort to growing our size in a manner that is sustainable into the future. To recruit new members we demonstrate robots in the cafeteria, set up booths at the freshmen orientation, hang fliers, hold callouts, and invite people on an individual basis when the opportunity presents itself.

Additionally, we are establishing relationships with school personnel never held before. In the past three years, our school principal has gone from knowing very little about robotics, to stopping team members in the hallway to ask about the robot and to speaking at the events we host. We have also been featured on his segment, “The Principal’s Spotlight” on the school’s FM radio station.

Through our dedicated coaches, we have formed relationships with local industry members and have acquired additional adult mentors for our team. These professionals in their fields have had an immediate impact on our team by providing expertise and additional assistance to us. In the future, this growing mentor base will allow our student numbers to be supported as we gain additional participants.

Our focus in the 2025-2026 school year has been continuing long running programs our team has been involved in, creating new opportunities, and generating a new, sustainable foundation for an expanded pipeline of FIRST programs within our school corporation.



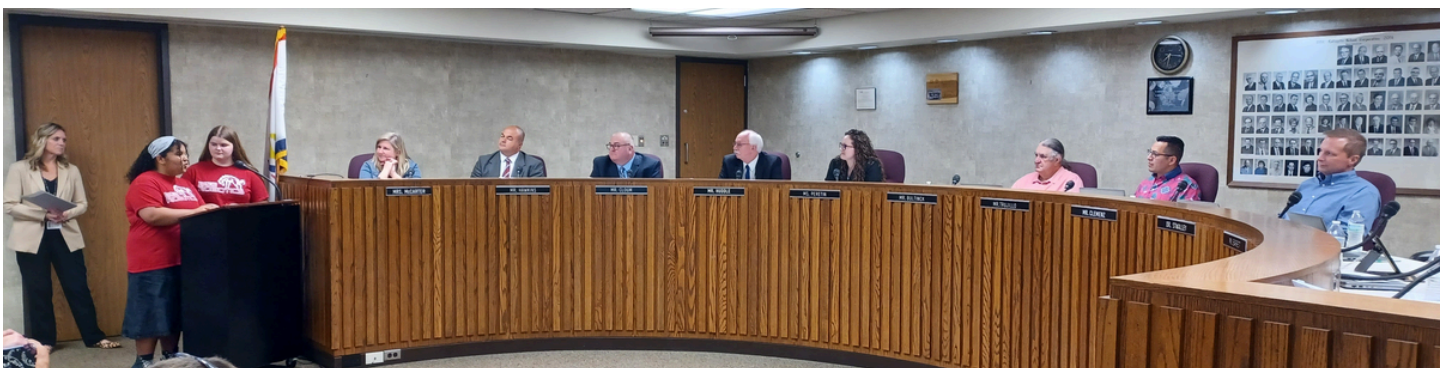
OUR SCHOOL CORPORATION



Team 1646 strives to make ourselves known in our school corporation. We do this by presenting our robots to the school board when possible and sharing our season's story.

Team 1646 shares our workspace with the FTC teams of the Lafayette School Corporation. One of these teams, 18638, serves 7th and 8th graders from nearby Tecumseh Junior High. Our team members act as guides and roles models for these students to emulate, sometimes offering direct assistance in their robot building process.

At our Intermediate and some elementary schools, some FRC coaches and students act as mentors for their FLL teams, helping those student begin their FIRST journey. While many of our FRC team members only began in FIRST in high school, several represent long standing participation in Broncho Robotics, having competed in FLL through FRC, and are continuing on to pursue STEM degrees and careers.



PIPELINE: THEN AND NOW

Precision Guessworks is just one segment of the Broncho Robotics progression of programs. There are 2 FLL Challenge teams at Sunnyside Intermediate School. Since 2019, there has been a FIRST Tech Challenge program at Tecumseh Junior High.

Prior to now, this covered grades 5-12 in the Lafayette School Corporation and has served the students well. But a large portion of our population was being left out. Read on to hear about the 8 new FLL Explore teams that were started this year to serve grades 2-4.

1646 ALUMNI PROFILES

46% of our 2025-2026 team members have participated in at least one other lever of FIRST programs prior to joining the FRC team.

Participation in other programs has been a long-standing strength and is continuing to grow and expand year after year.



*Cameron Caldwell (Class of 2017)
Nuclear Machinist Mate, US Navy
FRC Mentor*



*Ben Miller (Class of 2021)
Engineering Teacher Education &
Robotics Engineering Technology
Purdue University Class of 2027
Current FRC 1646 Mentor
FRC Event Volunteer*



*Jordan Mark (Class of 2024)
Aeronautical and Astronautical
Engineering Technology
Purdue University Class of 2028*



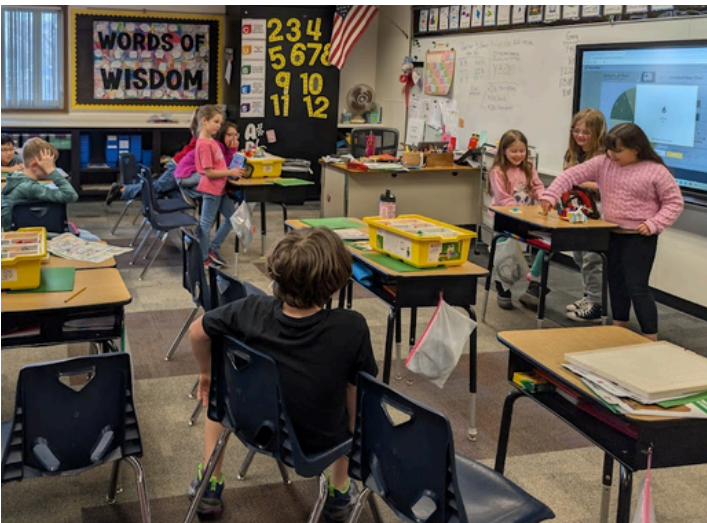
*Jaedren Hogue (Class of 2025)
Robotics Engineering Technology
Purdue University Class of 2029
FLL, FTC, & FRC Event Volunteer*

FOR OUR COMMUNITY

Precision Guessworks is dedicated to a variety of ways to stay connected to our community. We prioritize opportunities to bring STEAM education to those around us in a fun and engaging manner.

We schedule and organize our outreach in a way that is sustainable and achievable for our team. With only 10 students, we cannot hold demonstrations as frequently as we might desire, nor can we do many within the build and competition season without jeopardizing team competitive success and risking team member burnout from over-commitment.

Highlighted here are some of the long-standing partnerships we have within our community and the events we hold with them.



FLL EXPLORE EXPLOSION

Team 1646 takes initiative to make STEM accessible for everyone. Across our local elementary schools, we have started 8 FIRST LEGO League Explore teams. Our program spans across 4 different schools and engages with about 50 students ranging from 2nd-4th grade.

We allotted \$20,000 in equipment towards these 8 teams, providing them with LEGOS, SPIKE kits that include motors and electronic elements, and tablets to program things like motors and lights in the SPIKE kits.

These teams expanded our program substantially. Our pipeline ranges from 2nd grade all the way through High School!



8 TEAMS

4 SCHOOLS

54 KIDS

**\$20,000+
IN LEGOS AND
EQUIPMENT**

FLL EXPLORE EXPLOSION

Before we could start our FLL season, we worked with our local elementary schools and collaborated with teachers to get these teams started! Members of our team lead a professional development session to teach the teachers about FLL and the upcoming season.

Students led discussions about FIRST and its programs, the SPIKE kits, session planning, and end of season festival.

To keep our connection with our teams, members of our FRC team mentor these FLL teams every week, bringing focus to a new FIRST core value at every session. LEGO projects are built and programmed to then go back and innovate on those projects throughout our sessions.



After about 12 sessions, students will combine all of their ideas and newly-developed skills they acquired throughout the season to present in a festival.

Students are able to get experience talking with adults and sharing their ideas. By hosting this at our FRC Event, they are also able to experience what FIRST can be like when they are older.



EVENT HOSTING

Team 1646 is fortunate to be housed out of a school corporation with the kinds of facilities that event planners love. Since 2019, our schools have played host to numerous FLL, FTC, and FRC competitions.

As event hosts, our team members all have roles that need to be fulfilled for the events to be successful.

Our adult coaches serve on the planning committees for these events, reserving rooms as needed and acting as building contact persons, coordinating between the event personnel and school employees.

With the addition of 8 new FLLE teams, we are hosting their festival at our District event. Students will present their final models and poster board to judges and family.



EVENT HOSTING

Our students and other mentors play a vital role in the physical aspects of the event. We help setup the event space by laying out tarps, measuring pit spaces, hanging signage, preparing and running event concessions, and acting as general runners for whatever is asked of them. At the end of the weekend, we do it all in reverse and return our facilities into their usual states.

We have hosted the following events since 2019:

- 2019 FIN FRC Tippecanoe District
- 2020 FIN FTC League Tournament
- 2022 FIN FRC Tippecanoe District
- 2023 FIN FRC Tippecanoe District
- 2023 Indiana Robotics Invitational
- 2023 FIN FLL Qualifying Tournament
- 2024 FIN FTC Qualifying Tournament
- 2024 FIN FRC District Championship
- 2025 FIN FRC Lafayette District
- 2025 FIN FLL Qualifying Tournament
- 2026 FIN FLLE Festival
- 2026 FIN FRC Lafayette District



EVENT HOSTING

During the years we have hosted official FRC Events in our school, we have used our position as event hosts as a way to leverage good for our community.

Each year we have coordinated a donation drive to raise supplies on behalf of the Community Cancer Network.



The CCN provides resources to families affected by cancer in twelve counties in Indiana by providing requisite resources such as physical supplies and funding in addition to transportation services to cancer treatments.

We incentivize teams to bring in more by offering prizes such as robot-vendor gift cards and other robot supplies.



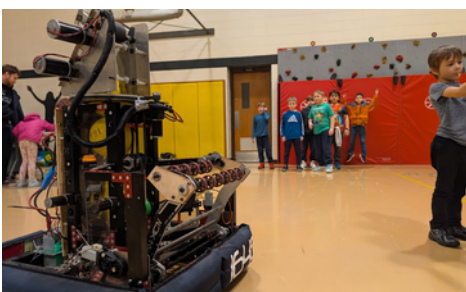
STEM NIGHTS

In our school corporation, many of the primary schools host multiple STEM nights for their students throughout the school year. On these evenings, teachers and school personnel provide a variety of STEM activities for the students in an after-hours program.

Team 1646 has a long-standing spot at these STEM nights. Depending on the size of the venue, we tailor our demonstrations to best serve our visitors. Typically, this involves bringing an FRC robot, 1-2 FTC scale robots, and a revolving displaying of various STEAM activities.

These activities typically include a “thinking” activity, where visitors have to use problem-solving skills to do the task (such as solving block programming or building circuits) and a “creative” task, which allows visitors to freely explore without having to engage in deeper thinking (such as drawing on robot coloring pages and building creative devices such as a banana piano).

Typically, we are involved in at least one STEM night at one of our elementary/intermediate schools per semester. At every school we have done STEM Nights at, we have been able to start an FLL team there.



IMAGINATION STATION

1646 has a long history with a local science museum in Lafayette, the Imagination Station.

We have held many different demonstrations in partnership with IS where they give over their entire main floor to our team for us to put on a variety of demonstrations. On these days, we are the only open exhibit at the museum and attendees are encouraged to spend time exploring our displays and interactive activities.

These demonstrations are STEAM focused centering around robotics and electronics.



Many of our visitors are on the younger age, typically 3-10 years old and our activities are tailored towards them.

For our youngest visitors, those who might not be able to comprehend the rest of the activities, we have team-designed robot coloring pages, inspired by team themes and robots.



One of our biggest hits with audiences are our collection of Sphero robots. These robots are small spherical robots controlled by a cell phone.

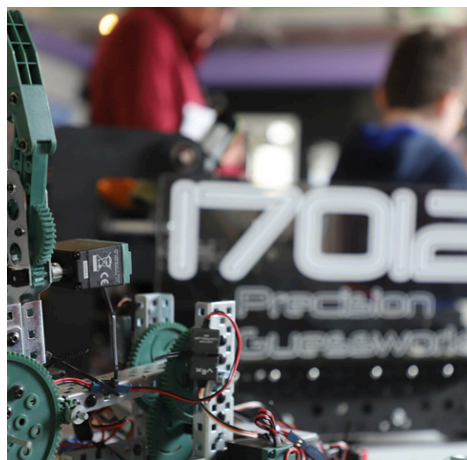
These introduce our visitors to robotics in a fun activity where we invite them to race each other around a small track and figure out all the different ways the phone can be used to control their motion.



IMAGINATION STATION



In our typical manner, we always bring along STEM educational activities beyond robots. Most commonly, we bring circuit kits to teach basic electrical concepts, such as series/parallel-circuits and components such as potentiometers and resistors. As available, we also bring special projects such as our custom-built pneumatic demonstrator, which allows students to operator a claw device and learn about the basics of fluid power.



Naturally, as a robotics team, we also bring robots of all shapes and sizes to Imagination Station. Given the museum's small size, we bring FRC robots to share and explain, but sadly cannot drive around. To give visitors robot driving action, we bring our FTC robots and allow visitors to control them and try a series of challenges such as navigating and scoring game pieces.

HANDS ON TRANSPORTATION

This event is a special partnership between Imagination Station and the city of Lafayette. The purpose of the event is to allow the community the chance to interact with transportation vehicles they may see in everyday life, but up close. These vehicles include fire trucks, police cars, city buses, ambulances, tractors, helicopters, and many more!

For many years, our robotics team has also received an invitation to the event to display our robots to the visitors.

As an outdoor event, this is a great opportunity for us to share our FRC robots from years past that we have kept for demonstration purposes, but don't work well in an indoor setting (such as our 2014 robot, Overbyte, that launches a 2 foot diameter yoga ball!). We allow visitors the chance to drive our robots as well as share with them what it is we do and how they can get involved.

We frequently partner with sister FTC teams 17012 and 18638 at these demonstrations, increasing the number of hands on robots for all involved.

Additionally at the event, team members assist in setup, directing traffic, and other tasks as needed.

