

Team 3176

Purple Precision

Parents Meeting

26 September 2024

Agenda

- Introductions
- Team 3176 / *FIRST* Robotics - *What's it all about?*
- Schedule
- Competition
- Budget
- Team Uniforms
- Sponsorship
- Varsity Team Letter
- Volunteer Opportunities
- Q&A





Introductions

Team 3176 represents Brownsburg High School in the series of *FIRST* Robotics Competition (FRC)

For Inspiration & Recognition of Science & Technology

Varsity-level **competitive team** (*not a club*) led by the Student Advisory Board (SAB) & guided by Team Co-Sponsors & Mentors



TEAM **3176** PURPLE PRECISION

Who are we?

- Rookie season in 2010
- Overlap with PLTW topics but different in key aspects
 - **Student-led, small-business** mentality, **real-world experience** in a time-critical environment, **student initiative** critical
- Comprised of ~50 students & ~10 mentors working in sub-teams
 - Mechanical Design
 - Fabrication & Assembly
 - Control Systems
 - Business Ops / Finance / Marketing
 - Community Outreach / Logistics
 - Multi-Media / Graphic Design

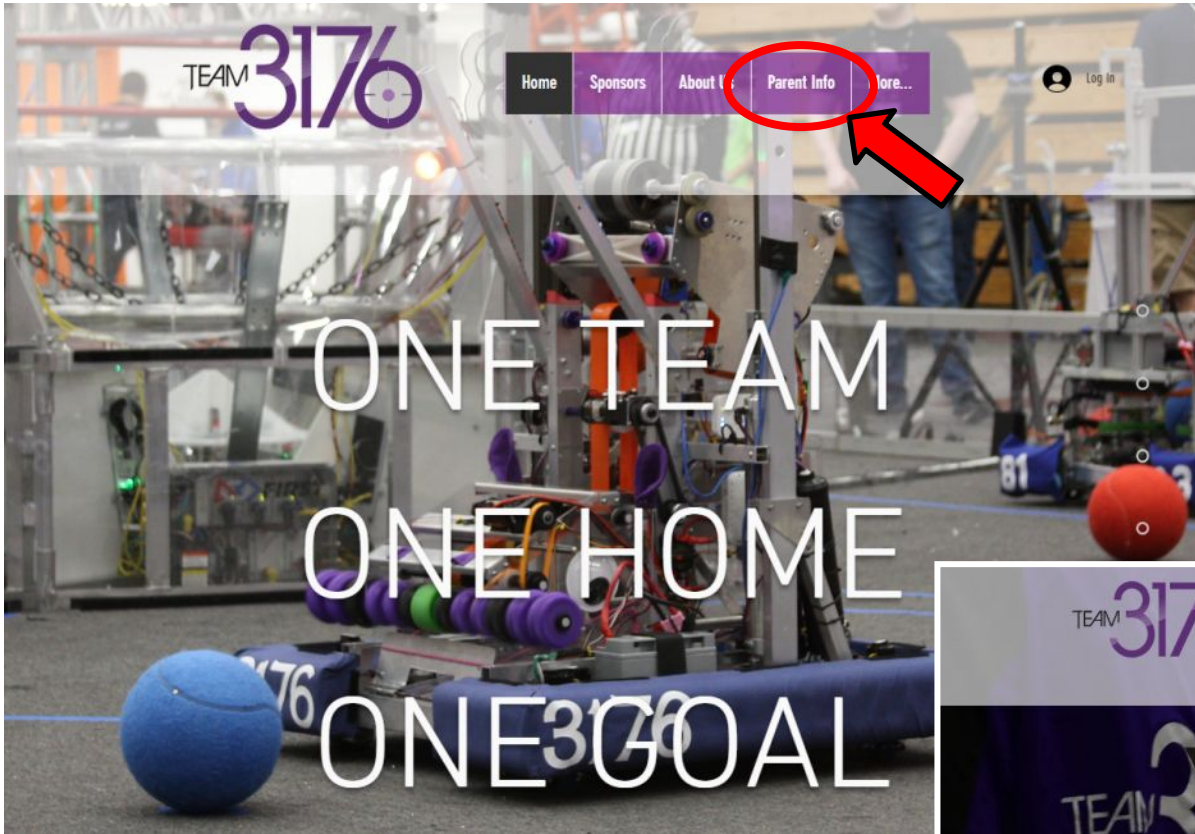


2024-2025 Season Recap

Attended 3 competitions
Played 47 matches
Win percentage (27-20)
Finalist at Mishawaka District
Technical & Business Awards



Team Website



www.team3176.com



FIRST Organization <http://firstinspires.org>



FIRST combines rigor of STEM learning with fun & excitement of traditional sports and the inspiration that comes from community

FIRST estimates in 2021-2022, the programs reached over 534,000 young people worldwide

8,500+ FRC Teams in 2021 from 35 countries

81% of FIRST alumni declare STEM major by their fourth year in college - Over \$80 million in scholarships opportunities

Women in FIRST Young women in *FIRST* have significant gains in all STEM areas including STEM interest, career interest, activity, knowledge, and identity compared to young women in the comparison group.

DECLARE A MAJOR IN ENGINEERING OR COMPUTER SCIENCE

FEMALE *FIRST* ALUMNI

48%

FEMALE COMPARISON GROUP

16%

MORE LIKELY TO TAKE COURSES IN ENGINEERING OR COMPUTER SCIENCE

3.5x

Computer Science

2.5x

Engineering



*x = times as likely

**FIRST
LEGO
LEAGUE**

AGES 4-16 GRADES PreK-8



**FIRST
TECH
CHALLENGE**

AGES 12-18 GRADES 7-12



**FIRST
ROBOTICS
COMPETITION**

AGES 14-18 GRADES 9-12



Team 3176 Yearly Schedule

Off-Season – August to December (2 mtg / wk)

Preparation for Build (Skills, Funds, Plans)

Off-season events

FRC Kick-off – **4 January 2025** (Saturday ~11:30-5)

Build Season - January to March (4-5 mtgs / wk)

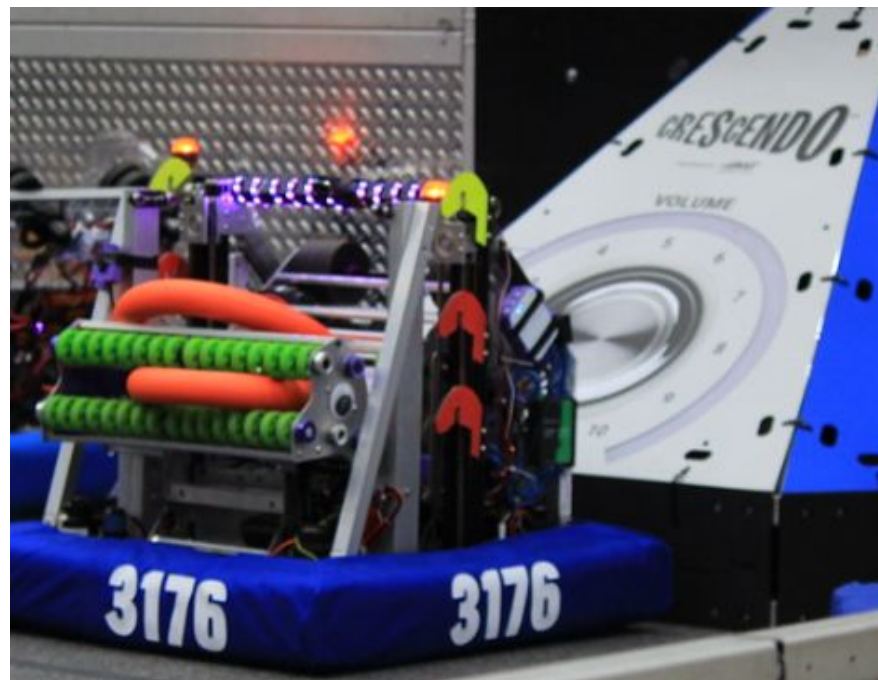
Competitions - March & April

District, State, Worlds

Close Out – May

Banquet & Outreach

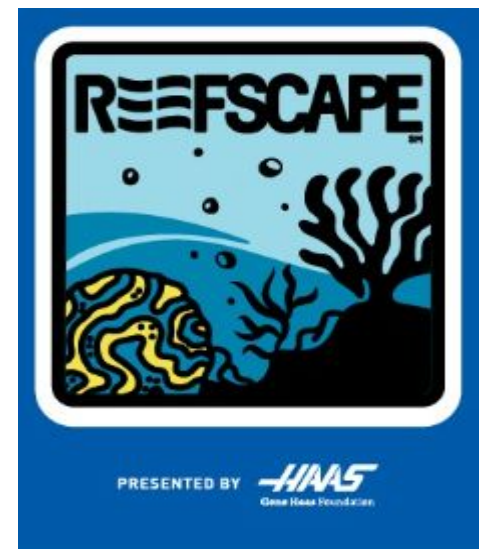
Planning – May - July





Competition Schedule

- **2025 District Competitions (2 of 4)**
 - Mar 1-2 (Sat/Sun) – Penn HS (Mishawaka)
 - Mar 15-16 (Sat/Sun) – Western HS (Kokomo)
 - Mar 22-23 (Sat/Sun) - Jefferson HS (Lafayette) }
 - Mar 28-29 (Fri/Sat) – Washington HS (Washington) }
- **2025 Indiana State Championship**
 - Apr 4-5 (Fri/Sat) – Center Grove HS (Greenwood)
- **2025 FIRST Championships**
 - Apr 16-19 (Wed-Sat) - Houston



PRESENTED BY **HMAS**
Gene Haas Foundation

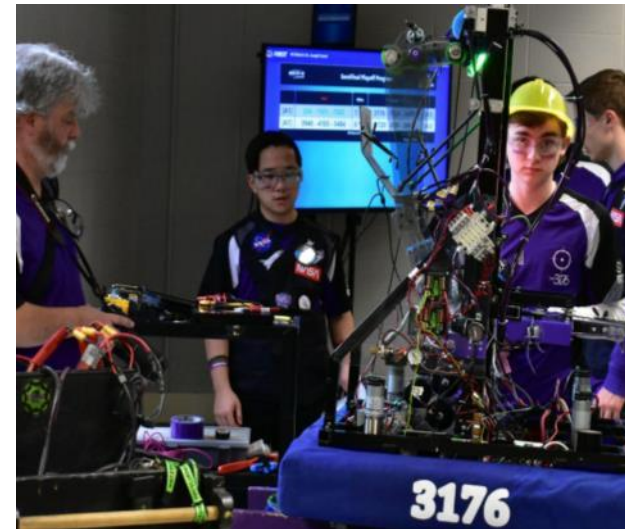


Robot Competition – Basics

- 3-v-3 alliance competition (red / blue)
- Match Timing
 - 0:15 Autonomous
 - 2:15 Tele-Op
- Qualification & Elimination Rounds
- Competitions are FREE to the public and live-streamed
- Game release video
- <https://www.youtube.com/watch?v=9keeDyFxzY4&t=12s>
- Final Match 2 - Mishawaka
- <https://www.youtube.com/watch?v=qKVLfb70Jil>
- Mishawaka Recap video
- <https://www.youtube.com/watch?v=MvIplHrVOyY>

Past Build Seasons

- Video summaries published weekly
- More use of CAD before fab & assy
 - Several design iterations before cutting metal
- **Swerve** drive – complex drive system
- Investment in *re-usable* components
 - Most of Robot Hardware / Inventory budget is reusable on future robots
- Work with multiple robots
 - Test out design concepts on “practice” robot
 - Refine for “competition” robot



Team Improvements

- **CNC upgrades / Mini Mill**
 - Brownsburg Education Foundation (BEF) grants in 2022 & 2023 to improve accuracy of precision machining
- **Pit Organization**
 - Designated areas to work on robot between matches
 - Better organization makes space safer & more efficient
- **Dedicated Practice Field**
 - Past two season have shown additional driver team practice greatly improves robot performance & overall team experience
 - Working with BHS to locate dedicated space to avoid traveling to Kokomo & Greenwood
- **Indiana State K-12 Robotics Grant**
 - 2nd year offered to Robotics teams
 - Team applied in Aug & should find out beg of Oct



2024-25 Team Budget Projections



- This year's budget (~\$50,000) is expected to be similar to previous years with full set of competitions
- Base Student Fees for 2024-25 will be **\$400**
 - **Due 14 November 2024** – *take time to make sure the team is the right fit*
 - New team member uniform fee is **additional \$85**
 - Sibling fees are \$300 if a family has multiple students on the team
 - Worlds Competition will be additional if team qualifies
 - Estimated ~\$1,000 per student and typically ~50% team members are able to attend
- Similar to majority of Indy-area FRC teams fees and other extra-curricular / competitive teams
- **Please** contact the Team Sponsors if you have **any** questions

2024-25 Team Budget Projections



- Goal to keep Student Fees less than 50% of budget
 - Drives requirement for Sponsorship visits – the whole team participates!

Income	Projected
Student Fees	\$20,000
New Member Jersey Fee	\$2,300
Sponsorships	\$20,000 Goal
Grants	Carrier - \$2,200 IN State ~\$8,000
Total	\$52,500

Expenses	Projected	Notes
Registration	\$10,250	6,000 district, 4,000 state, 250 off season
Transportation/Logistics	\$12,000	School bus transportation, one overnight, team lunches, robot transport
Robot	\$8,000	Build 2 robots to increase hands-on & design iteration
Swerve upgrades	\$3500	New swerve pod components
<u>Superpits</u>	\$3500	Building new pit modules
Inventory/Tools	\$2,500	Stock material replacement & tool consumables
Business Ops	\$1,000	General team expenses & button making materials
Uniforms	\$2,300	Uniform jerseys for new members
Website	\$200	Domain registration
Legacy /Worlds Fund	\$9,000	
Total	\$52,250	

Team Uniforms

- The team established a team uniform that can be used for all the years a student is on the team
- More durable shirt than standard T-shirt
- New students will receive two jerseys for the 2-day competitions
- Students will need to take care of the jerseys or purchase a new one



Sponsorship Network



- **Corporate sponsorships** are key to the team
 - Help fund activities & raise community awareness
 - Exposure to business operations for students
 - Future employment for students (internships / permanent)
- Personal connections are key to successful sponsor visits
- ALL Students are required to participate in sponsor visits

GOLD SPONSORS



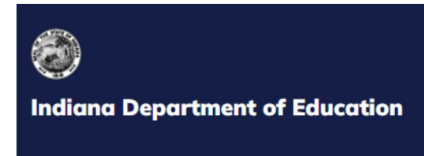
CAPITAL GROUP
&
McNeely
Family



GOLD SPONSORS



PURPLE SPONSOR



HOWENSTINE
FAMILY



BRONZE SPONSORS



IN-KIND SPONSORS

Rob Measel Team



**Thanks to
our 2024
Season
Sponsors!**

Team Documents

- **Student Handbook**
 - Sets expectations and guidelines
 - Includes required forms
- **On-line Student Application**
 - Full Application due ASAP
- **Business/Sustainability Plan**
 - Key document for team operation
 - Standard across all FRC teams



Varsity Team Letter

- For the past several years, students have been able to earn Varsity Team Letter
- Point-based system (100 pts needed)
 - Leadership (SAB, sub-team, drive team)
 - Attendance (Competition / Meetings)
 - Team Outreach Events (Cardinal Engr Night, Relay for Life)
 - Grades



Team Awards

- Event winner at Mishawaka District event 2024
- Finalist (2nd) at Greenwood District event 2023
- Finished as State Championship Finalist 2022
- Won Indiana State Championship in 2017
- We compete for more than robot competition wins
 - Team Sustainability Award @ State
 - Innovation in Controls Award @ Mishawaka
 - Excellence in Engineering award @ Washington



Community Outreach / Support

- Team 3176 also works to spread the excitement about Science, Technology, Engineering, and Math (STEM)
- Participate in events throughout the year
 - Volunteer at Middle School robotics clubs (West FLL team)
 - Volunteer at *FIRST* events (District, State, Worlds)
 - Visits to Adv Manufacturing (Roark / Indiana WaterJet)
 - Team Philanthropy through Relay for Life
 - *FIRST* Day in May



Volunteer Opportunities

- Mentor help with any of the sub-teams
 - Finance/marketing, computer programming, entrepreneur, multi-media, machinist, designer, engineer, etc.
 - Time commitment varies
 - *Any Interest?* – please email the team!
- Please join the team parent group - sign up sheet



501c3 - Brownsburg Robotics Team 3176



Creating a separate 501c3 allows the team to solve a few specific pain points, mainly relating to banking.

- The team will be able to establish a separate bank account.
- This will allow the team to be able to leverage modern banking and electronic payment methods for student fees, fundraising, and donation activities.
- Additionally, recent changes to the BCSC Request to Purchase process limits the speed in which the team can buy parts and supplies. With a separate bank account, we will be able to quickly place orders and receive needed materials and supplies – very important during build and competition season!

501c3 - Brownsburg Robotics Team 3176



Board Members

President - Dawn Mayer

Treasurer - Prabahar Ignatius

Secretary - Stephanie McNeely

At-large members - Beth Eaton, Rona Howenstine



Team Merch



ONLINE STORE

Visit the Team 3176 store provided by Rose Promotions! This site will close at midnight on Wednesday, October 9 and items will be picked up for distribution by Mrs. Swain on Monday, October 28. You may also opt to pick up your order from our retail location. All Sales Final.

No returns or exchanges on custom apparel.



Close: Wednesday, October 9
Distribution: Monday, October 28

ORDER NOW



<https://www.storessimple.com/rosepromotions/31959>

TEAM **3176** P U R P L E P R E C I S I O N

Contact Info



E-mail: team3176@brownsburg.k12.in.us

Team Sponsor - Dawn Mayer

Team Website

<http://www.team3176.com/>

ParentSquare

Instagram - team3176

Facebook - Team 3176 Brownsburg Robotics

YouTube

<https://www.youtube.com/user/Team3176>

Twitter

@Team3176

@firstinrobotics



Questions & Answers

