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Parents Meeting

Team 3176
Purple Precision
10 October 2023

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



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



2022-23 Season Recap

Attended 4 competitions

Played 65 matches

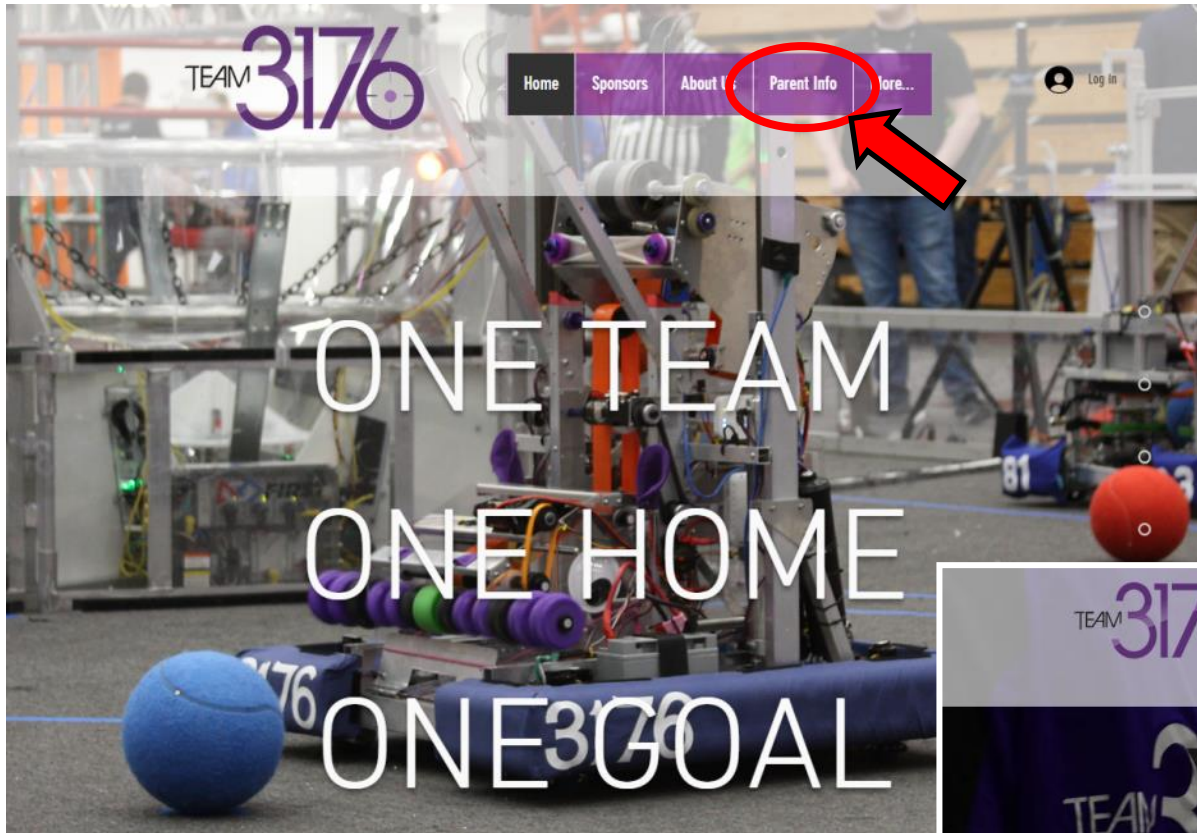
Best win percentage (40-25)

Finalist at Greenwood District

Technical & Business Awards



Team Website (incl Calendar)



www.team3176.com



FIRST Organization



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

<http://firstinspires.org>




**FIRST
LEGO
LEAGUE**




GRADES | AGES
PreK-8 | 4-16

**FIRST
TECH
CHALLENGE**



GRADES | AGES
7-12 | 12-18

**FIRST
ROBOTICS
COMPETITION**



GRADES | AGES
9-12 | 14-18



Team 3176 Yearly Schedule

Off-Season – August to December (1-2 mtg / wk)

Preparation for Build (Skills, Funds, Plans)

Off-season events

FRC Kick-off – **6 January 2024** (Saturday)

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

- **2024 District Competitions (2 of 4)**

- ✓ Mar 2-3 (Sat/Sun) – Penn HS (Mishawaka)

- Mar 16-17 (Sat/Sun) – Columbus East HS

- Mar 23-24 (Sat/Sun) – Plainfield HS

- ✓ Mar 29-30 (Fri/Sat) – Washington HS (Washington)

} BHS
Spring
Break
(first / mid)


- **2024 Indiana State Championship**

- Apr 6-7 (Sat/Sun) – Jefferson HS (West Lafayette)

- **2024 FIRST Championships**

- Apr 17-20 (Wed-Sat) - Houston



PRESENTED BY  HMAS
Green House Foundation

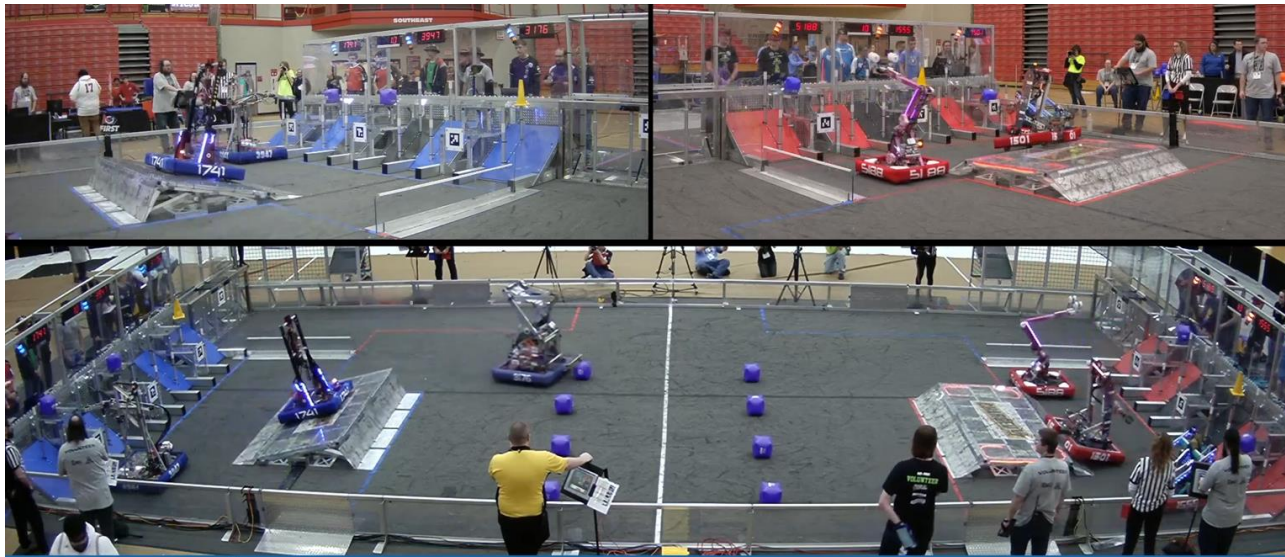
Robot Competition – Crescendo



- 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

CRESCENDOSM

PRESENTED BY **HIAS**
Game Host Organization



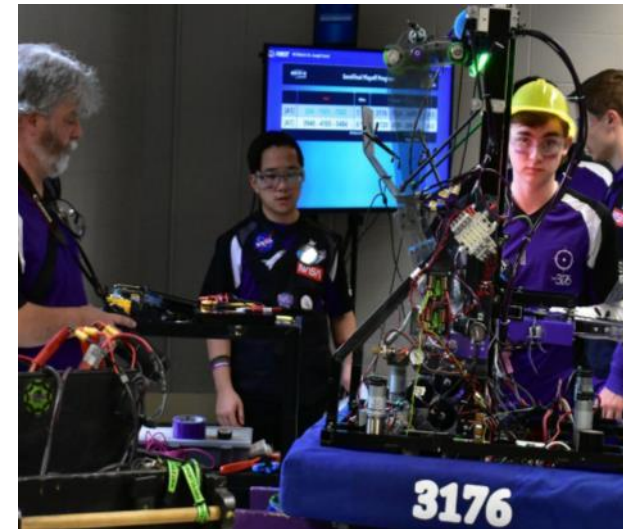
FIRST ENERGIZE PRESENTED BY **Qualcomm** **FIN District Greenwood Event** **Final 1** **CHARGED UP** PRESENTED BY **HIAS**

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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**
 - New law passed this summer that offers competitive robotics teams funding
 - Team applied in Sept & should find out in late Oct



2023-24 Team Budget Projections



- This year's budget (~\$40,000) is expected to be similar to previous years with full set of competitions
- Base Student Fees for 2023-24 will be **\$400**
 - **Due 16 November 2023** – *take time to make sure the team is the right fit*
 - New team member uniform fee is **additional \$75**
 - 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

2023-24 Team Budget Projections



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

Income	Budget
Student Fees Projected	\$18,400
New Member Uniform Fee	\$1,875
Corporate Sponsorship Goal	\$20,000
Total	\$40,275

Expenses	Budget	Notes
Match Registration	\$11,000	\$6,000 for District, \$4,000 for State, \$1,000 for off-season
Transportation / Logistics	\$11,500	Includes school bus transportation & team lunches, one overnight hotel, plus robot transportation
Robot	\$7,000	Work with multiple robots to increase hands-on and design iterations
Inventory / Tools	\$2,500	Stock material replenishment and tool consumables
Business Ops	\$1,000	General office expenses and button-making materials
Uniforms	\$1,875	Uniform jerseys for new members
Website	\$400	Domain registration & basic e-commerce
Team Investment	\$5,000	Pit/Storage Organization; Practice Field; Addl machining capability
Total	\$40,275	

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



WOODARD, EMHARDT, HENRY,
REEVES & WAGNER, LLP

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**Thanks to
our 2023
Season
Sponsors!**

Team Documents

- **Student Handbook**
 - Sets expectations and guidelines
 - Includes required forms
- **On-line Student Application**
 - Early Appl - Collected data entry (contact info, etc.)
 - Full Application due by this Friday, October 13
- **Business Plan**
 - Key document for team operation
 - Standard across all FRC teams



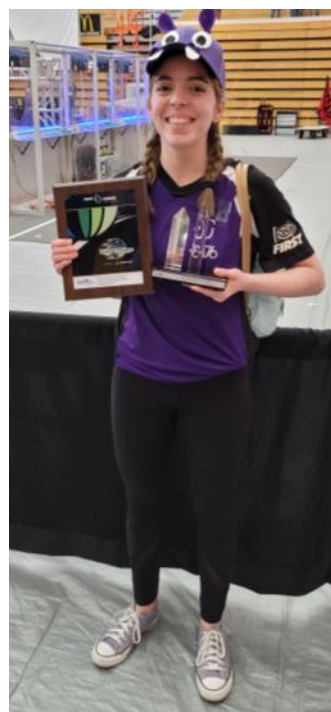
Varsity Team Letter

- 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

- 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
 - Entrepreneurship Award
 - Controls Innovation Award
 - Quality Award



Community Outreach / Support

- Team 3176 also works to spread the excitement about Science, Technology, Engineering, and Math (STEM)
- Participate in events throughout the year
 - Cardinal Engineering Night / Science Night
 - 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
- Coordination of banquet, team photos & senior banners, spirit wear
- *Any Interest?* – please ask a co-sponsor!





Contact Info

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

Team Website

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

Remind Code

@frc3176

YouTube

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

Twitter

@Team3176 @firstinrobotics

Team Co-Sponsors

Nathan Heidegger & Dawn Mayer

Questions & Answers

