



Team 3176

Purple Precision

Parents Meeting

29 September 2020

Agenda



- Introductions
- Team 3176 / *FIRST* Robotics - *What's it all about?*
- “Typical” Schedule
- “Typical” Competition
- COVID impact
- Sponsorship
- Activity Letter
- Volunteer Opportunities
- Q&A

*These slides are available
on the team website.*



Introductions

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

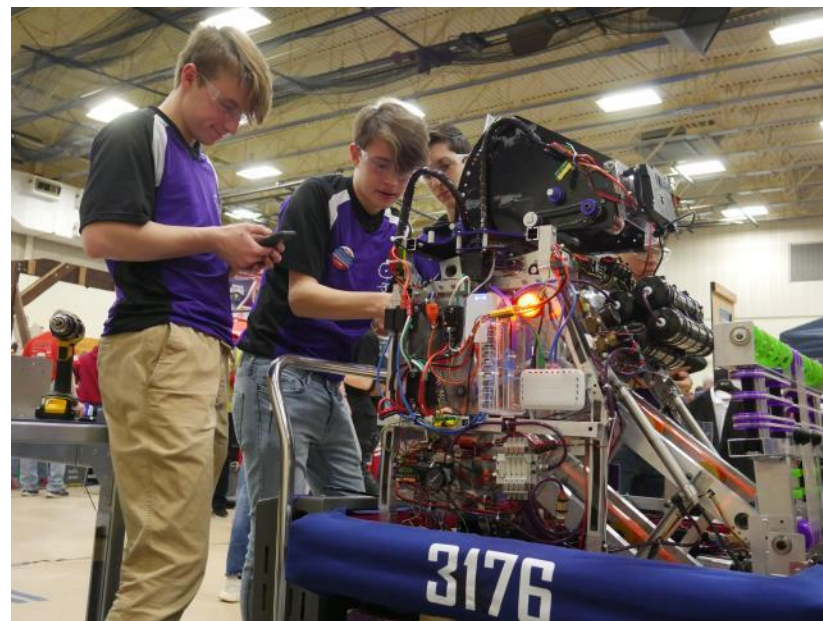
*For Inspiration &
Recognition of
Science & Technology*

Student-led by the
Student Advisory Board
(SAB) and guided by
Team Sponsors &
Mentors

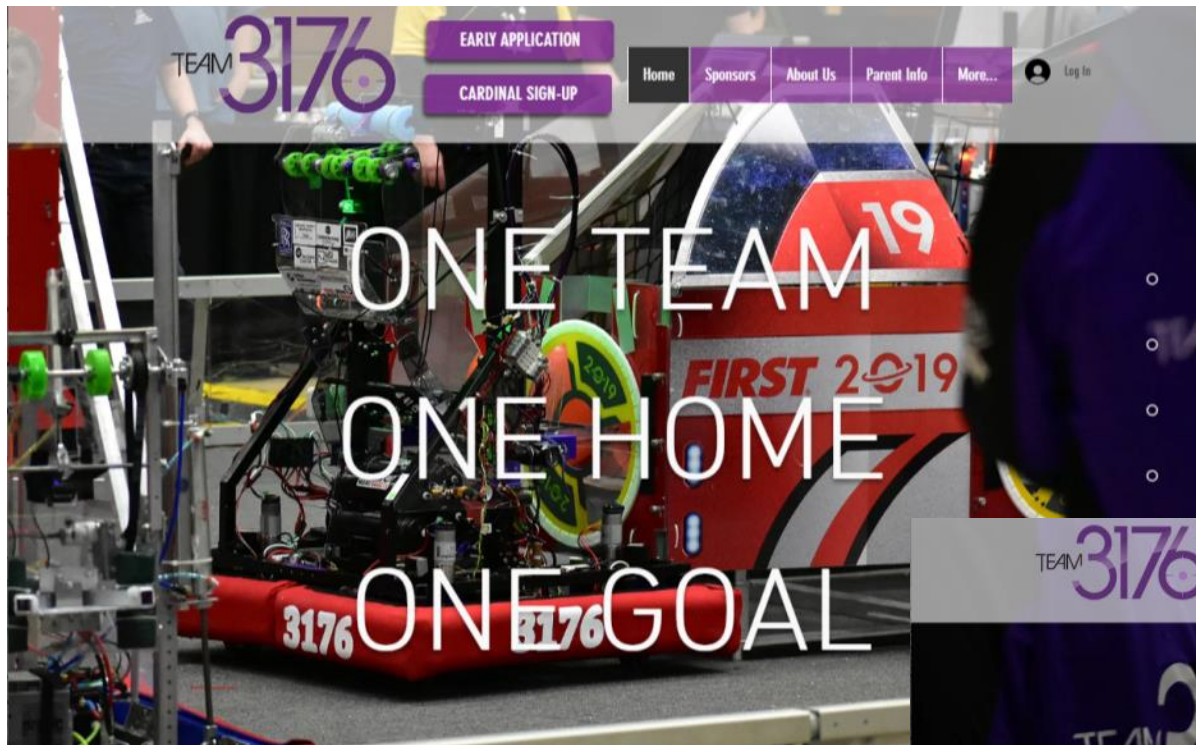


Who are we? Why 3176?

- 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
 - Sustainability – Researching / Learning Best Practice / Documenting
- Comprised of ~60 students & ~10 mentors working in various sub-teams
 - Mechanical Design / CAD
 - Electrical / Programming
 - Finance / Business / Marketing
 - Comms / Outreach / Logistics
 - Multi-Media / Graphic Design



Team Website (incl Calendar)



www.team3176.com

TEAM 3176 PURPLE PRECISION

FIRST Organization



Globally 570,000+ students / 67,000+ teams

3,914 FRC Teams in 2020

98,000+ Participants (Grades 9-12) from 35 countries

Over \$80 million in scholarships opportunities

<http://firstinspires.org>

<https://www.firstindianarobotics.org/>



FIRST
LEGO
LEAGUE JR.



FIRST
LEGO
LEAGUE



FIRST
TECH
CHALLENGE



FIRST
ROBOTICS
COMPETITION

“FIRST is more than robots. The robots are a vehicle for students to learn important life skills. Kids often come in not knowing what to expect – of the program nor of themselves. They leave, even after the first season, with a vision, with confidence, and with a sense that they can create their own future”

DEAN KAMEN

“Typical” Team 3176 Yearly Schedule



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

Preparation for Build (Skills, Funds, Plans)

FRC Kick-off – 9 January 2021 (Saturday)

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

Competitions - March & April

District, State, Worlds

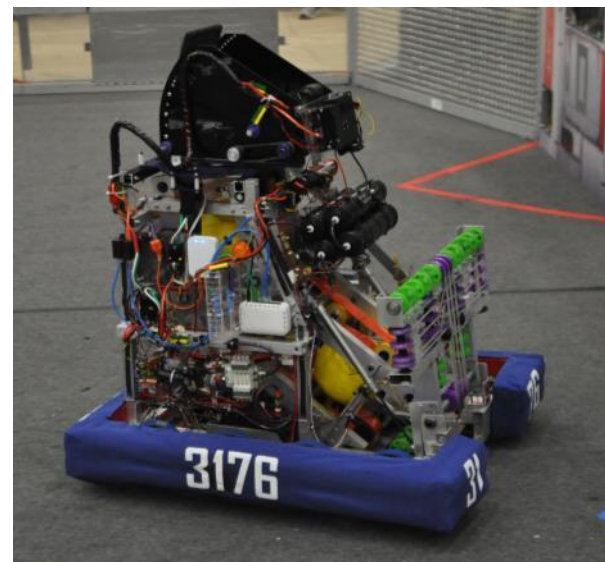
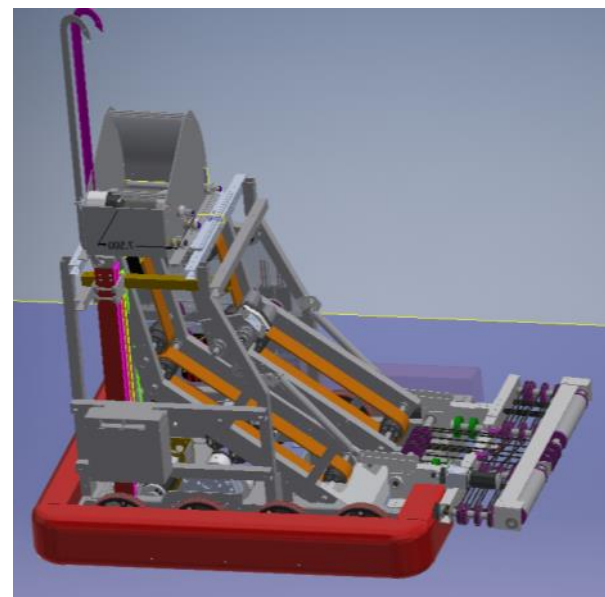
Close Out – May

Planning – May - July



2020 Build Season

- Video summaries published
- More use of CAD *before* fab & assy
 - Several design iterations
- Tank Drive system
 - Return to Swerve in 2021!
- Investment in re-usable components
 - Most of Robot Hardware / Inventory budget is usable on future robots (e.g., Falcon motors, Spark controllers, NavX, RoboRio)
- Planned to build 2 robots again
 - Test out design concepts on “practice” robot
 - Refine for “competition” robot
 - Build on second robot suspended



“Typical” Robot Competitions

- 3v3 alliance competition (red / blue)
 - Field size is same as basketball court
- Match Timing - 0:15 Autonomous / 2:15 Tele-Op
- Qualification Rounds / Elimination Rounds

SCORING PERIODS

:15 Autonomous:

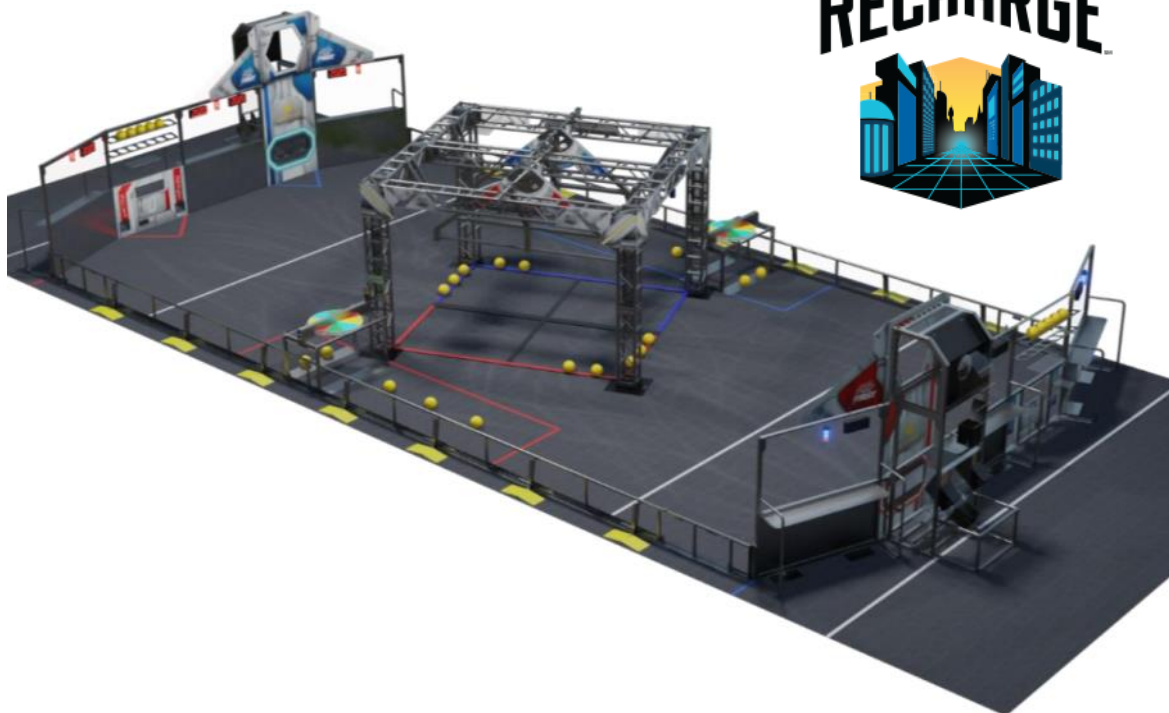
Droids follow pre-programmed instructions and Alliances score points by:

*Scoring Power Cells in the Power Port
Moving from the Initiation Line*

2:15 Driver-Controlled:

Drivers take control of the droids and Alliances scores points by:

*Continuing to score Power Cells in Power Port
Completing Rotation Control task
Completing Position Control task
Hanging from the Generator Switch
Getting the Generator Switch to the level position*



FIRST Announcements on COVID



- *Team 3176 is following all BCSC guidelines - masks are mandatory along with social distancing at all meetings*
- **FIRST** provided guidance this past week for the season
 - Recognize challenges for teams with remote & hybrid learning, limited access to build spaces, tools, and robots, as well as uncertainty for traveling to and attending in-person events
 - Season built around an experience that does not include in-person game play
 - Three new aspects introduced
 - Game Design Challenge
 - Innovation Challenge
 - INFINITE RECHARGE at Home
- **FIRST Indiana** is coordinating with teams and determining how to proceed – Health & Safety first!





2020-21 Team Budget Projections

- Typically the team runs on ~\$30K annual budget
 - Split 2/3 sponsorships & 1/3 student fees
- This year's budget is expected much different
 - *FIRST* registration fee is lower
 - Transportation expected to be less
 - Company sponsorships expected to be fewer / less
- Student Fees for 2020-21 are being finalized
- **Due early November 2020** – *take time to make sure the team is the right fit*
 - Sibling fees are \$50 less if a family has multiple students on the team
 - Uniform fee of \$50 for all first-year team members
- Historically student fees have been \$200 - \$300 range
 - Majority of Indy area FRC teams fees are \$300 - \$600
- **Please** contact Team Sponsors if you have **any** questions
 - Financial hardship will not prevent an engaged student for participating

Team Uniforms

- Three years ago 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 shirts for competitions and team events
- 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
 - Provide opportunities for community engagement
 - Exposure to business operations for students
 - Future employment for students
- Personal connections are key to successful sponsor visits
- Sponsorships can be cash or in-kind materials & services
- Students are required to support sponsor connections to broaden team experience

Thank you to our sponsors!



The Avgerinos Family

Jeff Rader Enterprises Inc



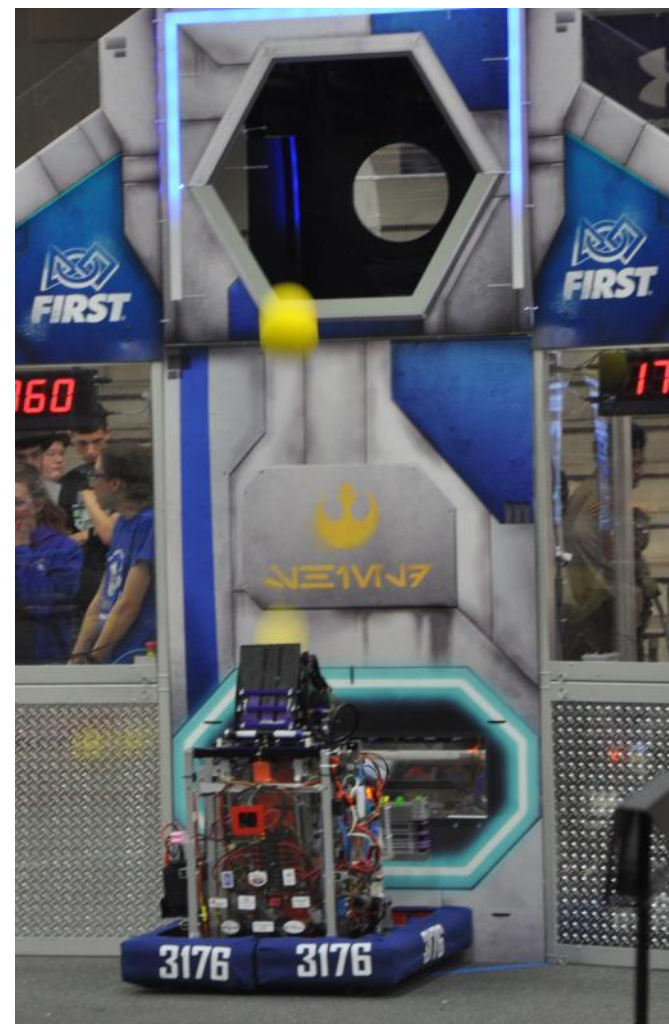
Hilligoss Bakery

The Ohnmeiss Family



Team Documents

- **Student Handbook**
 - Being revised & updated
 - More detail to set expectations and guidelines
 - Consolidate required forms
- **On-line Student Application**
 - Early Appl - Collect data entry
 - Full Application later in October
- **Business Plan**
 - Key document for team operation
 - Standard across all FRC teams



Varsity Activity Letter

- For the past four years, students have been able to earn Varsity Activity 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
- Status provided throughout the semester to students on progress



Community Outreach / Support

- Team 3176 also works to spread the excitement about Science, Technology, Engineering, and Math (STEM)
- We participate in events throughout the year
 - Cardinal Engineering Night / Science Night
 - Volunteer at Middle School robotics clubs (West / East)
 - 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 and help with any of the sub-teams
 - Finance/marketing expert, computer programming expert, business entrepreneur, graphic artist, fabrication/assy, etc.
 - Time commitment varies
- Coordination of the “Foodie” events with local businesses
- Sponsorship identification / fund drives
- Logistics - moving the robot / pit supplies back and forth





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 @IndianaFIRST

Team Sponsors

Nathan Heidegger & Dawn Mayer

Questions & Answers!

