

Agenda

- Welcome
- Introducing FIRST
- Novi Community Schools District - Robotics Overview
- Black Frog Robotics - Novi FTC Team 6134
- Q&A
- Robot Demo





For Inspiration and Recognition of Science and Technology

<https://firstininspires.org>



About FIRST

- FIRST is a world leading youth-serving global organization founded in 1989 by inventor Dean Kamen.
- Organization that prepares young people for the future through a suite of inclusive, team-based robotics programs for ages 4-18 (Kindergarten to 12th Standard) and advancing STEM education



PURPOSE: *FIRST* exists to prepare the young people of today for the world of tomorrow.

VISION: To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders.

MISSION: is to provide life-changing robotics programs that give young people the skills, confidence, and resilience to build a better world.



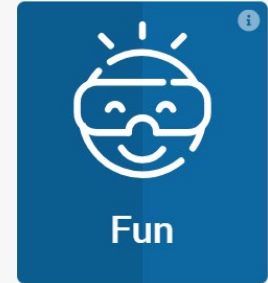
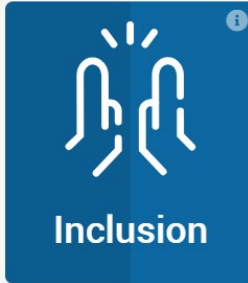
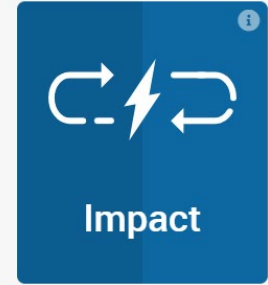
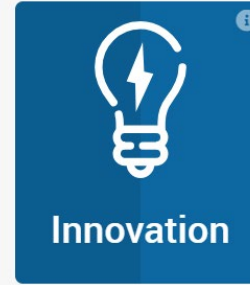
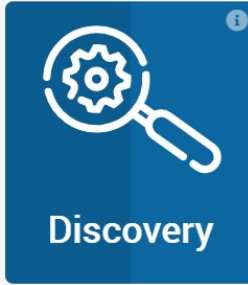
FIRST: Core Values

Gracious Professionalism[®]

Gracious Professionalism is part of the ethos of *FIRST*. It's a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.

Coopertition[®]

Coopertition fosters innovation by promoting unqualified kindness and respect in the face of intense competition.

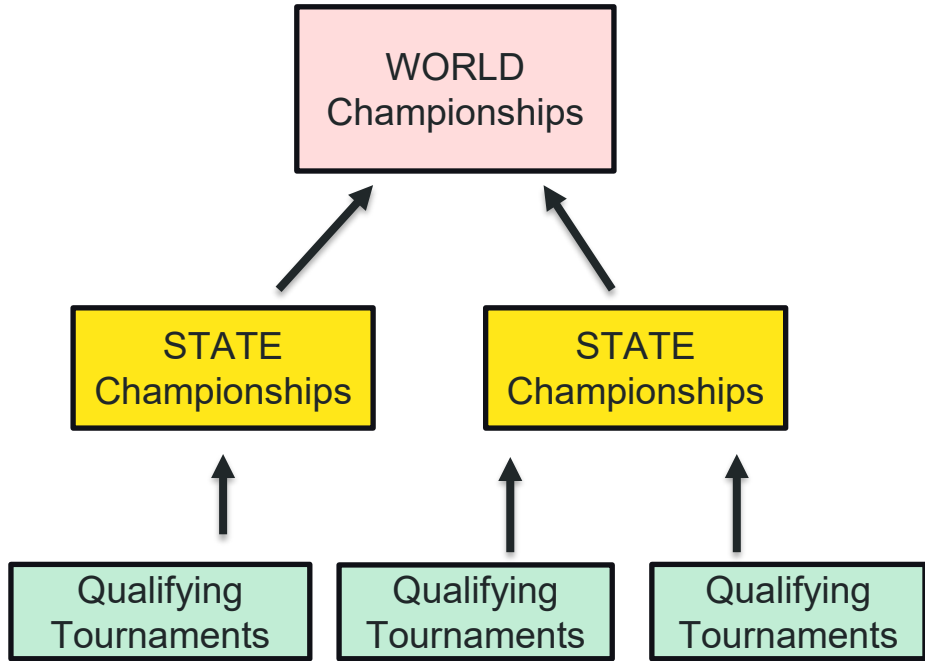


FIRST Programs

- FIRST programs emphasize not only technical skills but also important life skills such as teamwork, communication, critical thinking, and leadership.
- They aim to inspire young people to pursue STEM careers and become the innovators and problem-solvers of tomorrow



More detail about FIRST Tech Challenge – Middle school



FIRST Dean's List

Inspire Award

Think Award

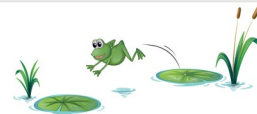
Connect Award

Innovate Award sponsored by RTX

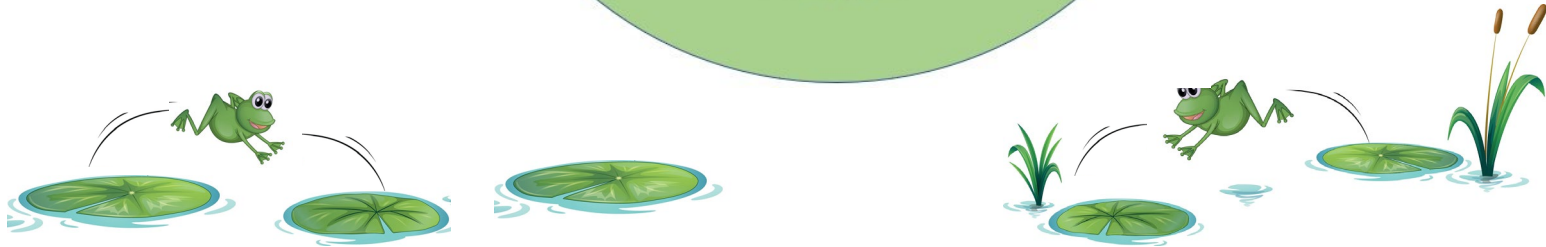
Design Award

Motivate Award

Control Award



Our Team



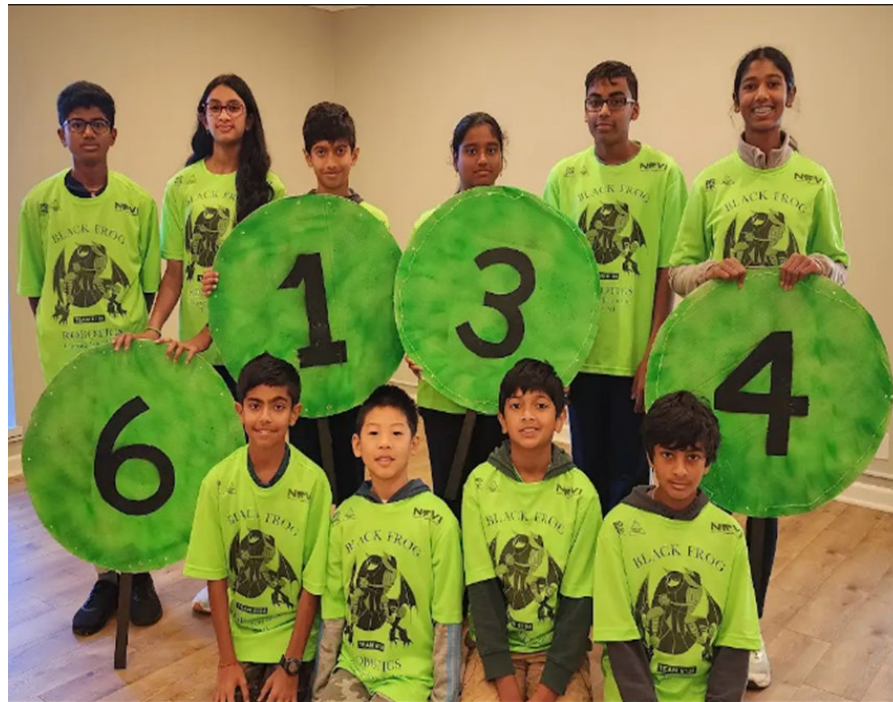
Our Team

Members - 10 students (Grades 6-8)

- Coach
- Parents
- Mentors
- Sponsors

Team was established in 2011 and has an impressive history.

1. First FTC team in the City of Novi
2. Has advanced to Worlds 7 times
3. Has won Inspire award 12 times



2023-24 Black Frogs Team



Team # 6134 - Black Frog Robotics - Awards

Year	Event	Award(s)
2024	Lake Orion FTC Qualifier	• Inspire Award 2nd Place
	Bedford FTC Qualifier	• Connect Award 2nd Place • Think Award
2023	MI Hartland FTC Qualifier	• Inspire Award 3rd Place • Think Award • Winning Alliance - 2nd Team Selected
	Michigan FTC State Championship-SE - Woodie Flowe...	
	Michigan FTC State Championship-SE	• Connect Award
2022	MI Freeland FTC Qualifier	
	MI Lake Orion FTC Qualifier	• Motivate Award 2nd Place • Think Award
	MI Grosse Pte. Woods FTC Qualifier	• Inspire Award 3rd Place • Think Award
	Michigan FTC State Championship-SE	• Connect Award



Timeline

Team Registration - Join a team!

First team meetings, outreach events, & community services.

Season's Game Reveal!

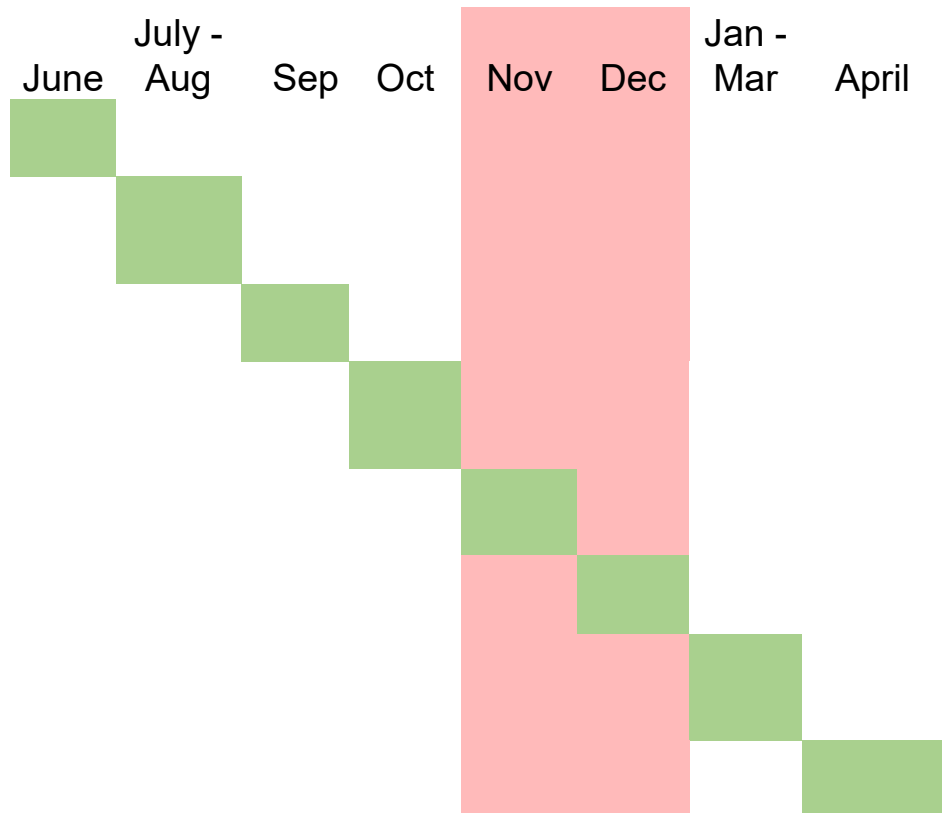
Building robot, team training, CAD , Programming, Documenting.

Qualifiers

States (Mission: Get chosen for World)

Preparation for Worlds - Drive practice, outreach events.

WORLDS!!! End of season.



Gracious Professionalism

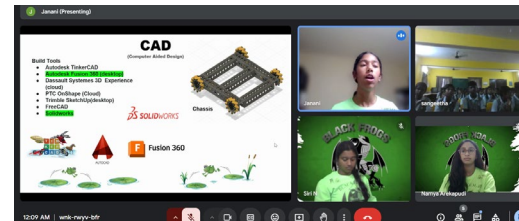
Our Coaches emphasize the following values:

- Respect for each other
- Being Humble and compassionate
- Treating others as you would like them to treat you
- Help each other and learn together
- Sharing ideas and being inclusive
- Encourage teammates
- Work Hard



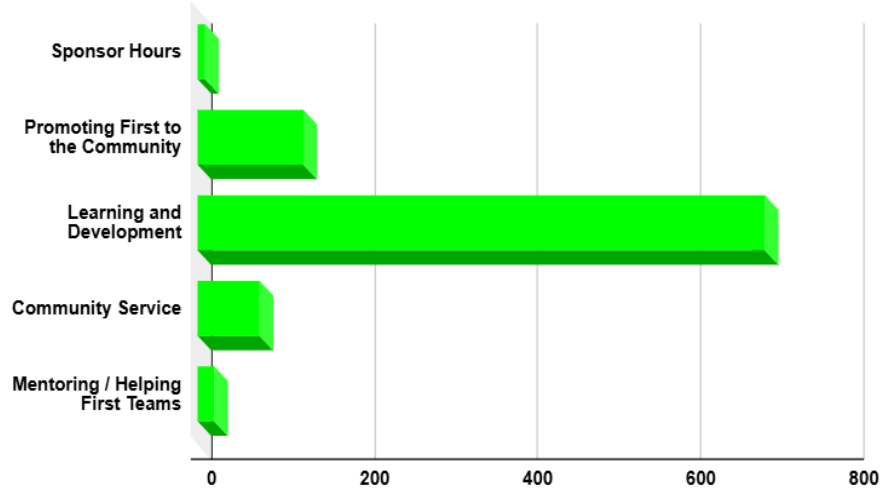
Our Team displayed Gracious Professionalism by:

- Working with FIRST FLL teams to share our ideas to help them with their project
- Our Novi FRC team generously guided us in programming and 3D printing
- Sharing knowledge with FTC teams in India and Romania
- Attending the Novi Public Library with our fellow FIRST teams.

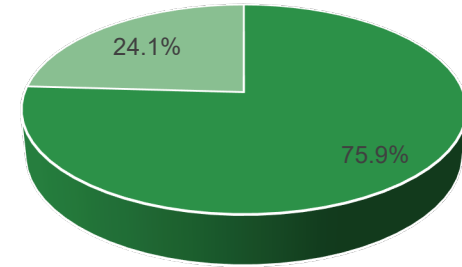


Outreach Events

Outreach Summary Till Nov 16th 2024



Total Outreach Events - 52
Number of Hours - 928

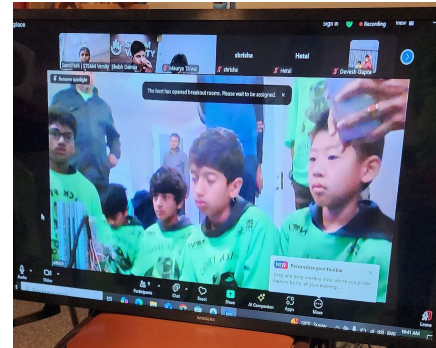


■ Technical ■ Non-Technical



Non-Technical Programs

- Pink Out
- Jack O Lantern Jubilee
- Pumpkin Fest
- Trunk or Treat
- Outreach to middle schoolers in India
- Village Oaks Feed the Need
- City of Novi Superhero Showcase
- Willow Brook Farms Community Gathering



Community Service

- **Bountiful harvest:** Assisted by packing food and organizing grocery shelves, shopping and delivering groceries at curbside.
- **Hanuman Temple:** Cleaned and organized their kitchens and assisted with serving food to the visitors.
- Participated in **Toys for Tots** and **Mitten for Detroit** for the upcoming season.
- Thank you to our favorite super heroes, **The Novi Fire Fighters** and **The Novi Police Department** with gifts



SRI BAKTHA HANUMAN TEMPLE



Connecting with Professionals

- Lawrence Tech University and Kettering University
- Program training from Black Frog Alumni and NOVI Frog Force 503 FRC team
- CAD- Solidworks training sessions from Matt Bednarski, Mahesh & PID, Control feedback from Dr.Harsh
- Meeting STEM Professionals Abigail Overbeck & Elena Shrestha
- Hands on training at Ramayah Auto Garage



Stem Equity – Women in Robotics

Elena Shrestha - AI Robotics Researcher at University of Michigan

Elena is a Postdoctoral Fellow with the Robotics Department at U-M since August 2022. Her research interest is in developing autonomous unmanned vehicles that are capable of intelligent planning and decision-making.

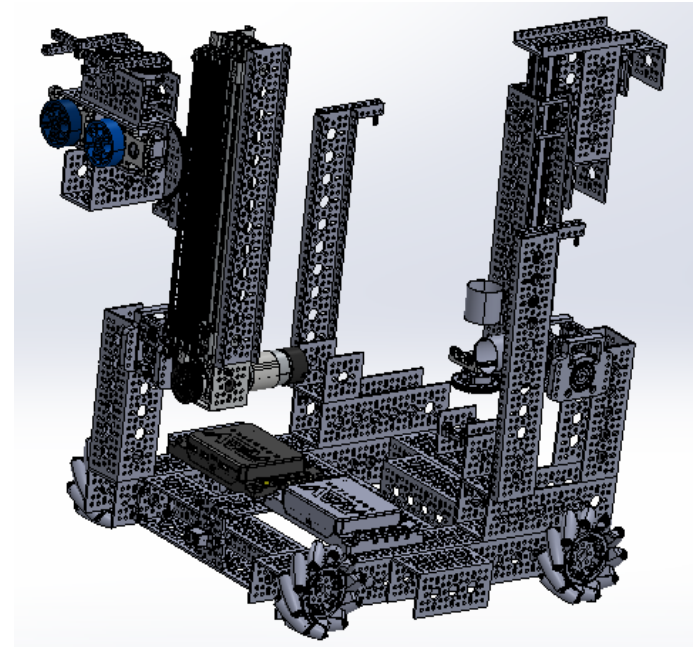
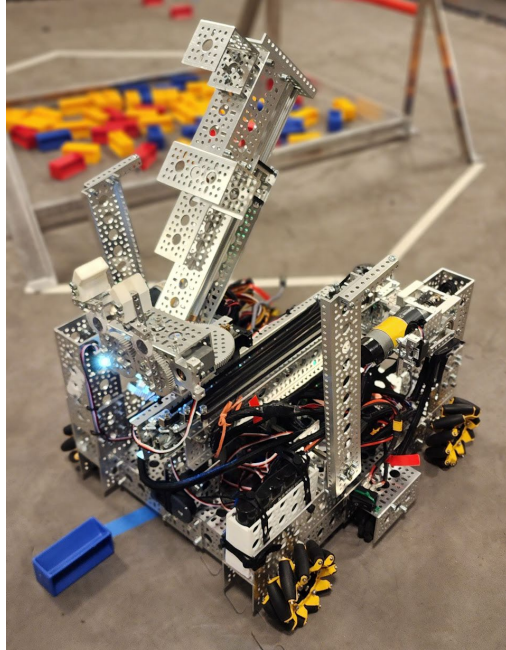


Abigail Overbeck – R&D Paint Process Engineer at FANUC

Abigail joined FANUC after completing a Masters in Mechanical Engineering with a concentration in Mechatronics. She enjoyed working on the control of robotic arms, computer vision and kinematics.



Meet DWARAKA



MIDDLE SCHOOL PROGRAM

FIRST TECH CHALLENGE

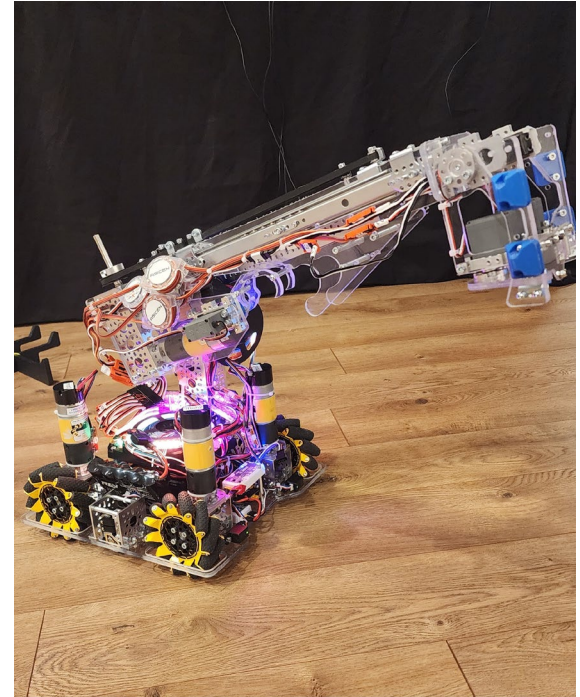


PRESENTED BY  **RTX**

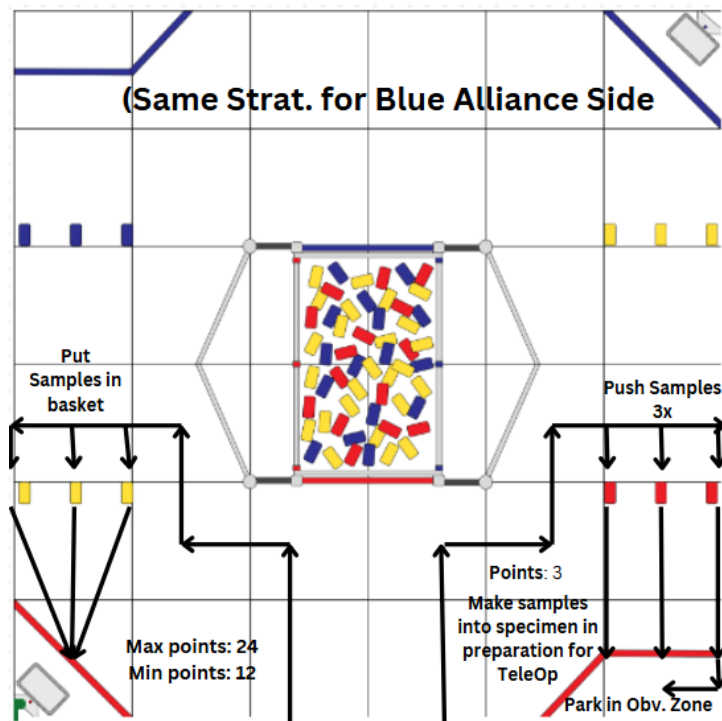


Our Team Goals:

- To design and build a competitive robot
- To promote FIRST while upholding the FIRST core values
- To help those in need through community service
- To engage with our sponsors
- To develop student leadership
- To extend our knowledge of STEM and to share our knowledge with others
- To understand real world STEM applications
- To make a positive impact in our community



Game Strategy



Autonomous Strategy

Hang specimen on the high chamber

Park the robot in the ascent zone

Tele-op

Pick up sample(s) from submersible

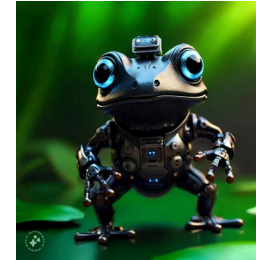
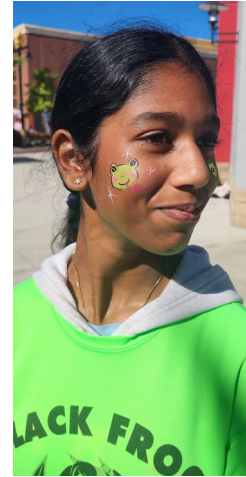
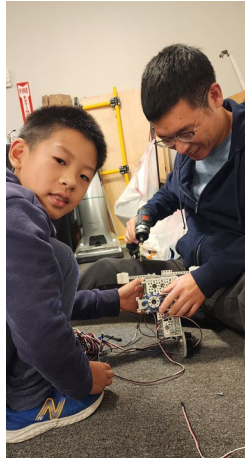
Take to human player and hang them in the high basket

End Game

Hang a level 2 ascent



Beyond the Robots



Black Frog 6134

Thank You to our Sponsors



BOSCH



SRI BAKTHA HANUMAN TEMPLE



**DTE Energy
Foundation**



Thank You!

Any Questions?

Thank you very much for giving us this opportunity to present to you.

