



# FIRST Tech Challenge



Presented by:  
Team 23493 Techno Domination &  
Team 26708 The Argonauts

# Introduction

Techno Domination is a **third-year** FTC team in Northeast Ohio, part of the **4-H club** and we are committed help spread FIRST in our **community**, **mentor** other teams, and **inspire** future STEM enthusiasts.



The Argonauts are currently a **second-year** FTC team located in Solon, Ohio. We are part of the **Young Innovators Society (YIS)** and we help teach others about FIRST and inspire them to be part of it.



# What is FTC?

- FTC is the next level after FLL (**7th-12th graders**) with advanced robots using **metal hardware** and more advanced sensors
- Less “missions” compared to FLL.
- It's **hands-on, creative**, and is full of suspense!
- FTC kickoff season 2025-2026: Saturday, September 6, 2025
- Nov → 1st League Meet
- Dec → League Tournament
- January - March → Qualifiers and States

FLL



FTC

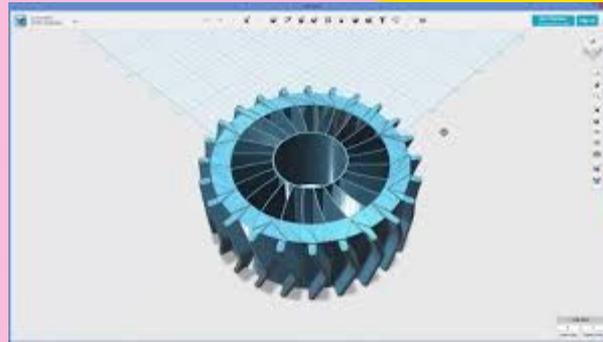
# Why FTC?

## Hard Skills:

- New concepts of coding (Java, Vision Control, Auto pathing)
- Designing and Building
- Using Power Tools
- Soldering
- CAD (A digital design of a 3D object)

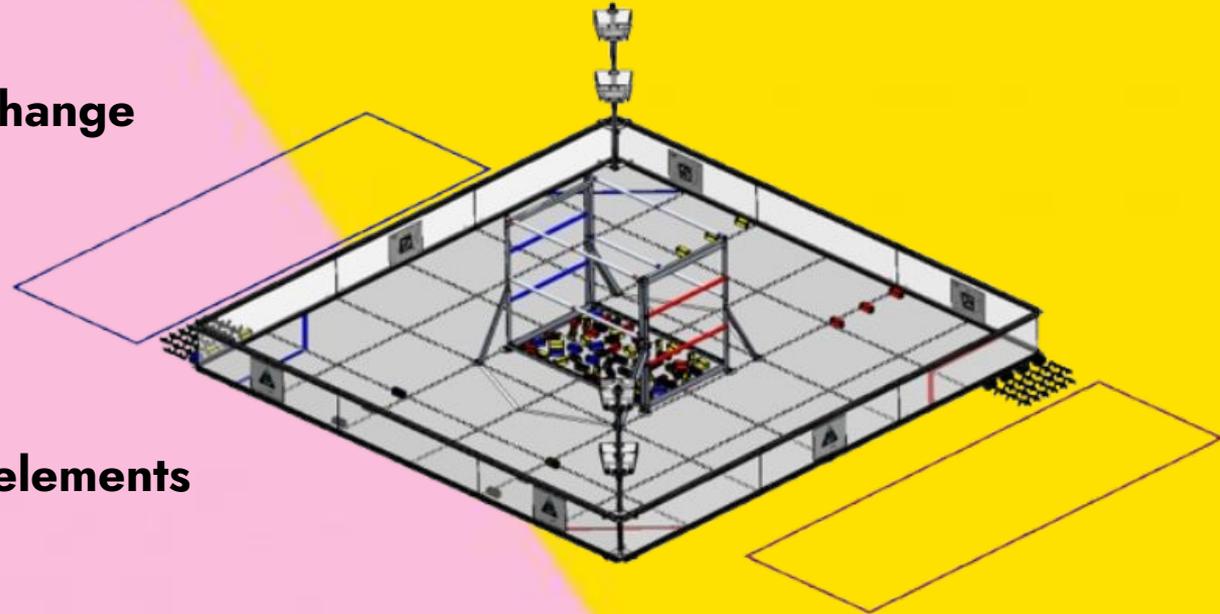
## Soft Skills:

- Leadership roles
- Working as a team
- Constructive feedback
- Responsibility
- Problem solving



# Field

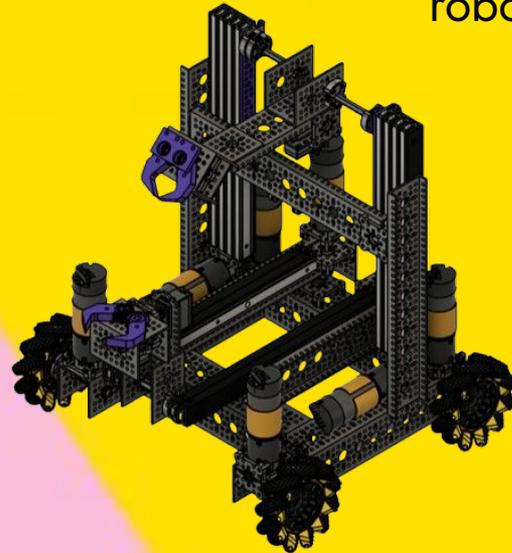
- The field for FTC is **HUGE!** Instead of being a table, it's a bunch of field mats that fit together. (12x12 feet field)
- The elements on the field **change every season**
- **AndyMark** - to buy field elements



# Robot

In FLL and in FTC there are many differences and similarities when it comes to the robot.

- FTC robot (18"x18"x18") vs FLL which is smaller
- **Legos** vs **Metal**
- Robot **creativity** - not restricted to just legos
- Coding in block programming or Java in FTC



FTC Suppliers:

1. REV
2. GoBilda

We don't recommend Tetrix, Studica, or AndyMark robot parts!

# Robot Game

## Autonomous

- 30 second period
- Robot does pre-coded tasks

## TeleOp

- 2 minute period
- Drivers use controllers to control the robot

## Endgame

- Last 30 seconds of TeleOp
- Different tasks added on to get more points



1. Teams will be running around 5 matches
2. Your partner for one match may be your opponent in another!
3. 2 alliances with 2 teams -> Red alliance and Blue alliance

# Judging

- 5 minute presentation to judges and every team has to give an engineering portfolio
- During competitions, the judges also stop by your pit area to **ask questions**
- There is **no** innovation project in FTC.
- There are **multiple awards that we can get from judging** so we plan our presentation according to the award criteria.



This was Techno Domination's pit area at states!

# Awards & Qualification

- In FTC, a team can go to **more than one** qualification tournament (**max 3**)
- This gives teams **multiple chances** to qualify for the State tournament
- Awards in FTC are split into three categories:



- The **Inspire Award** goes to a team that **performs well** in all three categories

# Team members and roles

Just like in FLL, in FTC, there is a team that **works together** to create a robot and get ready for competition.

- FTC max limit: **15 people**; FLL max limit: **10 people**
- Roles include:
  - **Coders**
  - **Builders**
  - **Marketers**
  - **Engineering Portfolio**

**\*Team members have to commit time to join sessions, competitions, and outreach, just like in FLL!\***

# Cost

**FTC costs much more than FLL.** However, in FTC, there are many **grants** that can help fund a team, like the \$1000 **FTC Sim** grant for rookie teams and other grants from **companies**.

	<b>FLL</b>	<b>FTC</b>
<b>Registration</b>	\$275	\$325
<b>Field Set</b>	\$95	\$600
<b>Field Walls (reusable)</b>	\$320	\$1200
<b>Robot Materials</b>	~\$550	~\$1500 (for 1 robot)
<b>Total</b>	~\$900	~\$3625

# Mentors

1. How to get help → **Discord, local teams**
2. How they can help → **Hardware, Software**, any side that needs help

**Remember! It's important to get valuable mentors and stay in touch with them!  
The right people can teach you many new things!**

# Next Steps

- To start an FTC team, look for at least 6 people that are interested in Robotics.
- You can purchase FTC kits at Gobuilda/Rev and start with basics like Drivetrain
- Contact any of the teams here!
- Attend FTC off season events in August ([Turtle](#) and [Gator](#) events)

## KITS



FTC Kits



Chassis Kits



Linear Motion Kits



Pan Kits



Bundles



Mecanum Drivetrain Kit V2

REV-45-2470

\$470.00

# Important Resources

- Gm0 - <https://gm0.org/en/latest/>
- Reddit - <https://www.reddit.com/r/FTC/>
- Discord - <https://discord.com/invite/8v3cbkj>
- FTC documentation - <https://ftc-docs.firstinspires.org/>
- Techno Domination Email - [ftcteam23493@gmail.com](mailto:ftcteam23493@gmail.com)
- The Argonauts Email: [ftc26708theargonauts@gmail.com](mailto:ftc26708theargonauts@gmail.com)
- Mr. Nathan (Kent State Robotics): [tackle@kssrobotics.org](mailto:tackle@kssrobotics.org)
- Ohio FTC PDP - [bholt@firstpartners.org](mailto:bholt@firstpartners.org)
- Other local teams
- Scouting at scrimmages and league meets

**Thank You!**

**Any Questions?**