

first tech challenge 12089

What is FTC?



- FTC, or FIRST Tech Challenge is a branch of FIRST Robotics, a program dedicated to the education and growth of students in STEAM:

Science, technology, engineering, arts, mathematics

- FIRST comprises of 4 different competitive levels: Junior FLL, FLL, FTC, and FRC.
- Each FTC team consists of 3–15 team members and 2 or more coaches, working together to build a robot with materials that can compete in the themed match. There is a new match and set of rules each season.
- **FTC is similar to FLL, but more challenging and rewarding!**

Infographic

FIRST[®] LEGO[®] LEAGUE JR.

Captures young curiosity by exploring real-world scientific challenges, learning teamwork, and working with motorized LEGO[®] elements

GRADES

K-4

FIRST[®] LEGO[®] LEAGUE

Elementary and middle school-aged students research a real-world engineering challenge, develop a solution, and compete with LEGO-based robots of their own design

GRADES

4-8

FIRST[®] TECH CHALLENGE

Teams of middle and high school-aged students are challenged to design, build, and program a robot to play a floor game against other teams' creations

GRADES

7-12

FIRST[®] ROBOTICS COMPETITION

High school-aged teams compete head to head on a special playing field with robots they have designed, built, and programmed

GRADES

9-12

At the competition!

- This competition is made up of 2 alliances of 2 teams, and the alliance with most points win.
- This year, we are supposed to put glyphs in crypto boxes, and we get to reach out of the field.
- This competition is one of the most fun things that you could do, because you don't know who you could be paired with, and you get to see what other teams have come up with.



At the competition!

- Each match consists of two alliances—one blue and one red—and two teams in each alliance. Teams are represented by two drivers and one coach.
- In this year's challenge, Relic Recovery, teams are to fill a cryptobox with cubical glyphs, and to place the relic on the mats adjacent to the field.
- Competitions are both fun and inspiring, as not only can you show off your own robot, you can discover great things about other teams' robots, too!

Sample FTC match.



Presentation at Competition

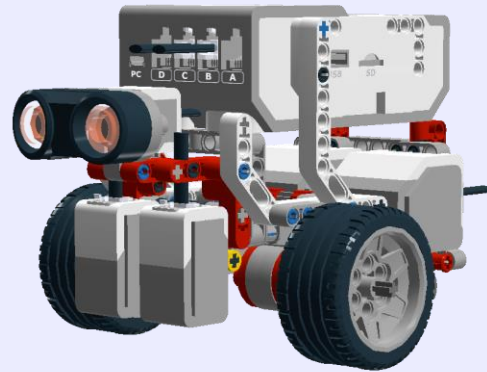
- For the Inter-League competition (the state-qualifying competition with teams from other leagues) and beyond, you must give a presentation.
- This presentation is for the judges to get to know your team and includes an interview and an engineering notebook.
- The presentation is the gateway to many awards, such as the most prestigious award, the Inspire Award, which can be the key to a great scholarship.

Core Values

- We are a team.
- We do the work to find solutions with guidance from our coaches and mentors.
- We know our coaches and mentors don't have the answers; we learn together.
- We honor the spirit of friendly competition.
- What we discover is more important than what we win.
- We share our experiences of others.
- We display Gracious Professionalism in everything we do.
- We have FUN!!!

What is FLL?

- FLL, or FIRST Lego League another robotics program for children aged 9–14.
- It is very similar to FTC, but more simplified. Robots are built using LEGO Technic parts, and programmed using drag-and-drop coding.
- There are three components in the FLL competition: Core Values, Project, and Robotics Game.



FLL Sample Robot Design

Project

- The project is based off of a different theme every year.
- Students pick a specific branch of the topic and create solutions to solve the problems.
- For example, the theme of one year is natural disasters. One team chooses to do their project on how to help people survive tsunamis. Their solution is to design rescue house to be deployed in proximity of the affected area. They give a presentation about it to the judges.

Core Values

- Unlike FTC, teams in FLL are judged on their ability to work together to solve problems
- The team is given a task to do. They are judged on their teamwork and cooperation, as well as their enthusiasm and spirit.



Q&A

FAQ:

For more information, visit <https://www.firstinspires.org/>

Visit our website at <https://matsbrobot.weebly.com/> (UNDER CONSTRUCTION)

Contact us at matsbrobot@gmail.com