

Franklin **FIRST** Robotics



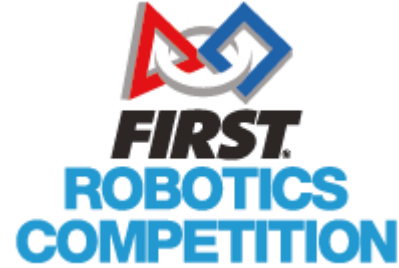
4K-5K



Grades 1-3



Grades 4-8



Grades 9-12

2024-25 Season

<https://FranklinFIRSTRobotics.org>



[2024-25 FLL Season Teaser](#)

[Link: FLL Video Montage](#)

Franklin FLL Informational Meeting – May, 2024






Informational Meeting Agenda

7:00-
7:10

- Welcome
- What is  **FIRST** ?

Adults

- What is FLL?
 -  **DISCOVER**
4K-5K
 -  **EXPLORE**
Grades 1-3
 -  **CHALLENGE**
Grades 4-8
- Season Schedule / Overview of a season
 - FLL Discover
 - FLL Explore
 - FLL Challenge
- How do we get started?
- Student interest & signup
- Coach/Mentor/Helper interest & signup

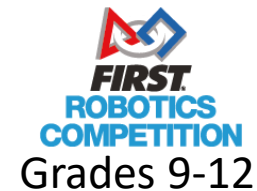
7:10-
7:45

Kids

- All ages – Drive Saber Robotics’ FRC Robot
- Grades K-3 – Lego time!!!
- Grades 4-8
 - Ice breaker team building exercise
 - FLL Challenge Programming Introduction
 - Closing team building exercise

7:45-
8:00

- What’s after FLL?
 - FRC Team 2506 – Saber Robotics Demo & Discussion



8:00-
8:15

- Open networking & Q&A time

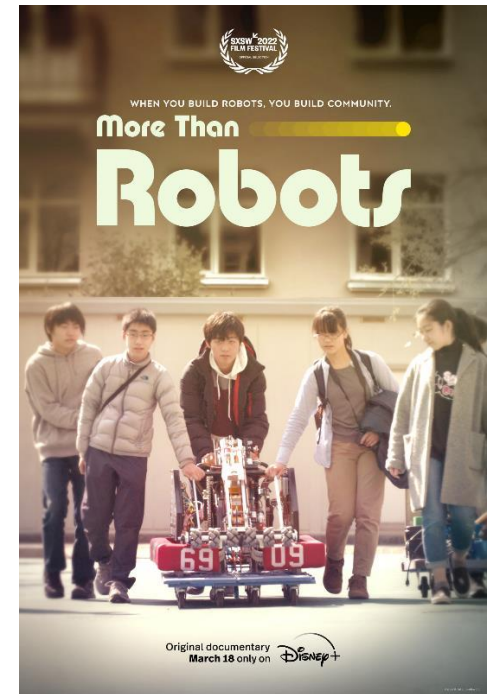


What is **FIRST**®?

“For Inspiration and Recognition of Science & Technology”

We Are the World's Leading Youth-Serving Nonprofit Advancing STEM Education

FIRST® inspires young people to be science and technology leaders and innovators by engaging them in exciting mentor-based programs that build science, engineering, and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.



4K-5K



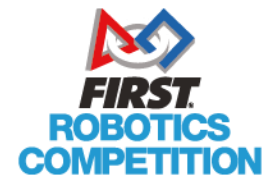
Grades 1-3
Ages flexible



Grades 4-8



Grades 7-12*
* Franklin does not have an FTC team



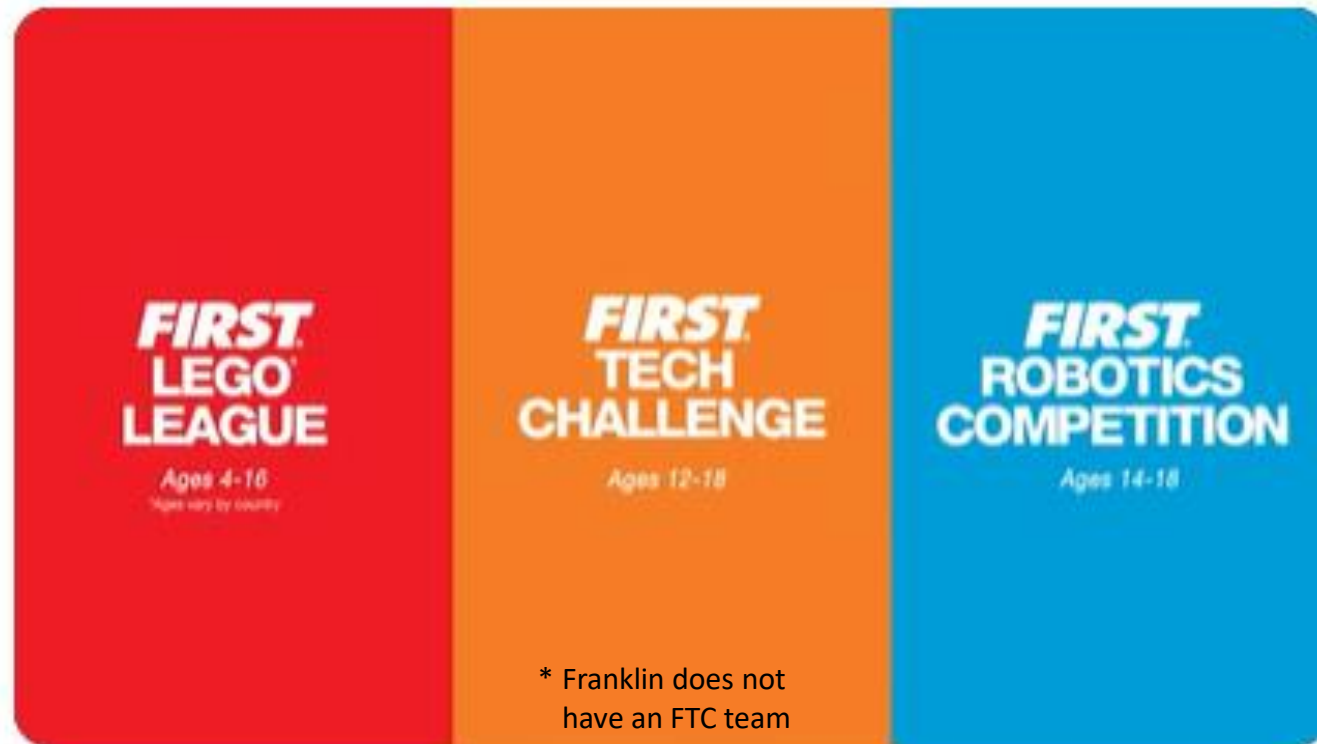
Grades 9-12



What is **FIRST**®?

We express the *FIRST* philosophies of *Gracious Professionalism*® and *Coopertition*® through *FIRST* Core Values:

- **Discovery:** We explore new skills and ideas.
- **Innovation:** We use creativity and persistence to solve problems.
- **Impact:** We apply what we learn to improve our world.
- **Inclusion:** We respect each other and embrace our differences.
- **Teamwork:** We are stronger when we work together.
- **Fun:** We enjoy and celebrate what we do!



[Link: FIRST Introduction Video](#)



Franklin **FIRST** Robotics

Break out sessions

- Adults
- Kids
 - 4K-5K & 1st-3rd grade in the Fall
 - 4th-8th grade in the Fall
 - High school in the Fall



DISCOVER

4K-5K



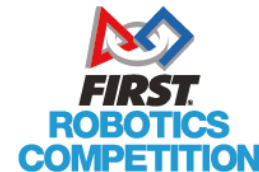
EXPLORE

Grades 1-3



CHALLENGE

Grades 4-8



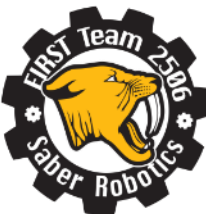
Grades 9-12



What is FIRST Lego League?



FIRST LEGO League introduces science, technology, engineering and math (STEM) to children ages 4-16* through fun, exciting hands-on learning. *FIRST* LEGO League participants gain real-world problem-solving experiences through a guided, global robotics program, helping today's students and teachers build a better future together. In *FIRST* LEGO League, students engage in hands-on STEM experiences, building confidence, growing their knowledge and developing habits of learning. *FIRST* LEGO League's three divisions inspire youth to experiment and grow their critical thinking, coding and design skills through hands-on STEM learning and robotics.



What is FIRST Lego League?



See your kids grow and shine through *FIRST*[®] LEGO[®] League.



- Starting with Discover, children are introduced to the fundamentals of STEM while working together to solve fun challenges and building models using LEGO[®] bricks.

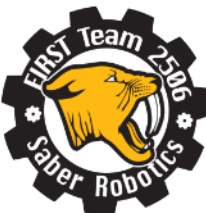


- As participants progress into Explore, children will take their background knowledge of STEM and put it into practice as they work in teams to design and build robots using SPIKE[™] Essential.



- Once they are ready to move into a competitive setting, they join Challenge and apply their STEM skills combined with critical thinking to work with a team, build a robot and compete in an exciting, mission-based Robot Game.

From Discover, to Explore, and then to Challenge, students will understand the basics of STEM and apply their skills in an exciting competition while gaining productive learning habits, confidence, and teamwork skills along the way.



What is FIRST Lego League?



[Link: FLL Introduction Video](#)



FLL Discover

**FIRST
LEGO
LEAGUE
DISCOVER**

**GRADES
4K-5K**

FIRST® LEGO® League Discover is a playful introductory STEM program for children ages 4-6 that ignites their natural curiosity and builds their habits of learning with hands-on activities in the classroom and parent engagement activities to extend learning at home using LEGO® DUPLO® bricks.

CHILDREN:

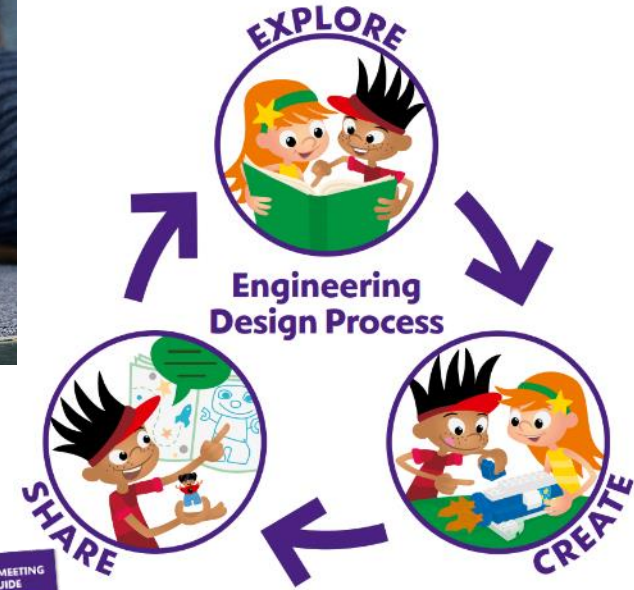
- Are introduced to the fundamentals of STEM while working together to solve fun challenges and build models using LEGO bricks

WHAT IT OFFERS:

- New real-world theme each year
- Understanding the basics of STEM; Building habits of learning
- Culture of sharing, learning, and fun
- Engagement of kids in meaningful, hands-on experimentation
- Alignment with national educational standards
- In-school events

HOW IT WORKS:

- Class Pack offering designed for 8 children, ages 4-6
- Classroom or structured after-school program
- Adult coaches and mentors needed to guide the team
- 10 sessions
- LEGO® Education STEAM Park (reusable) and annual Discover Set



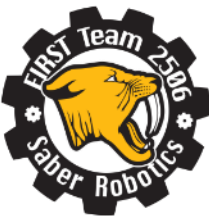
Time Commitment:

Teams meet for 10 sessions for 1 hour meetings (generally, 1/week)

“We want to change the culture by celebrating the mind.”

— DEAN KAMEN,
FOUNDER, FIRST

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FLL Explore

In *FIRST*® LEGO® League Explore, teams of students ages 6-10 focus on the fundamentals of engineering as they explore real-world problems, learn to design and code, and create unique solutions made with LEGO® bricks and powered by LEGO® Education SPIKE™ Essential or WeDo 2.0.

CHILDREN:

- Build and program a model that moves using LEGO Education SPIKE™ Essential or WeDo 2.0
- Document their work in individual Engineering Notebooks and present their team research journey in a collaborative team poster
- Learn teamwork skills
- Build self-confidence, knowledge, and life skills

WHAT IT OFFERS:

- New real-world theme each year
- Builds STEM skills and develops habits of learning
- Culture of sharing, learning, and fun
- Engagement of kids in meaningful, hands-on experimentation
- Presentation skills development
- Community-hosted events and official *FIRST* LEGO League Explore Festivals

HOW IT WORKS:

- Teams up to six children, ages 6-10
- Adult coaches and mentors needed to guide the team
- Parents, grandparents, teachers, community volunteers
- Meeting place (school, after-school, homeschool, or community space)
- 12 sessions
- LEGO Education SPIKE™ Essential (reusable) or WeDo 2.0 and annual Inspire Set

Team Journey



“My favorite part is working together as a team and building together”

— ANGELINA, TEAM MEMBER

Time Commitment:

Teams meet for 12 sessions for 1-2 hour meetings (generally, 1/week)



FLL Challenge

**FIRST
LEGO
LEAGUE**

CHALLENGE

GRADES

4-8

Friendly competition is at the heart of *FIRST*® *LEGO*® League Challenge, as teams of students ages 9-16* engage in research, problem-solving, coding, and engineering – building and programming a *LEGO*® robot that navigates the missions of a Robot Game. As part of Challenge, teams also design an innovative solution to a real-world problem relevant to the theme.

CHILDREN:

- Understand real-world uses of STEM
- Apply critical thinking skills
- Build habits of learning

WHAT IT OFFERS:

- Application of science and math concepts
- Hands-on problem solving
- Programming experience
- Application of the Engineering Design Process
- New real-world theme each year
- Sports-like tournaments with judges and awards

GET STARTED:

- Teams of up to 10 children, ages 9 to 16*
- Adult coaches and mentors
- Meeting place (school, after-school, homeschool, or community space)
- Parents, teachers, community volunteers to help
- 12 sessions
- *LEGO* Education *SPIKE*™ *PRIME* or *LEGO MINDSTORMS*® Robot Set (reusable) and annual Challenge Set

“I want to build things nobody else has even thought of yet.”

— CHARLES PETERSON, TEAM MEMBER (10 YEARS OLD)

PROVEN, VERIFIABLE IMPACT!**



87% Express Interest in Doing Well in School



95% Time Management Skills Increase



99% Teamwork Skills Increase



Time Commitment:

Teams meet 2 days/week for 2-hour practices (mid-August-December)
If team advances to Sectionals, practices continue through January.
If team advances to State, practices continue through February.



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Season Overview – Lego Force

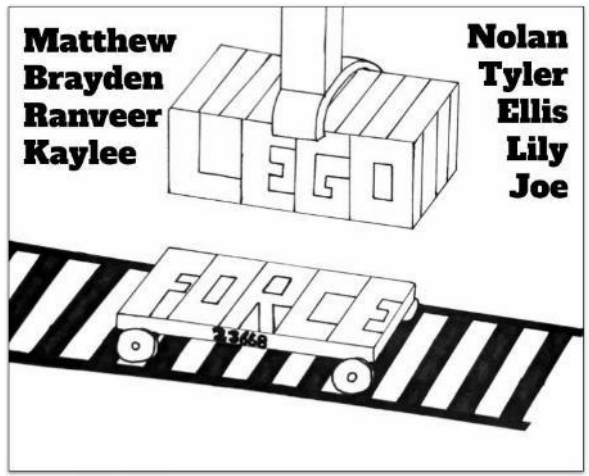
**FIRST
LEGO
LEAGUE**

CHALLENGE

GRADES

4-8

Practice



**FIRST
LEGO
LEAGUE**
CHALLENGE

RA **Rockwell
Automation**

Compete



2021-2022

CARGO CONNECTSM

Learn how cargo is transported, sorted, and delivered to destinations

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Over Robot

2024/2025 *FIRST* LEGO League Season Calendar

Mid-May	Registration Opens
August 6	Global Season Launch
Mid-August – March	Overall Season
November – April	Tournament/Festival Season
November-January	Regional Tournaments
January-February	Sectional Tournaments
February	State Tournament
April	World Championship (“Worlds”)



* Team registrations close on a regional basis. Teams will be accepted until all slots are filled.



MAY
Registration for
the season opens



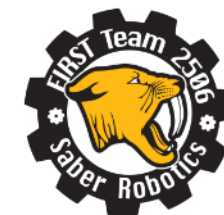
AUGUST
Season
Launch



NOVEMBER-MARCH
Local and regional
competitive events



APRIL
FIRST[®]
Championship



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FLL – Budgets

2024-2025 *FIRST* team registration fees

- *FIRST LEGO League Discover* ([link](#))
\$233 = \$195 + \$38 S&H
- *FIRST LEGO League Explore* ([link](#))
\$145 = \$125 + \$20 S&H
- *FIRST LEGO League Challenge* ([link](#))
\$264 = \$250 + \$14 S&H

2024-2025 Product Pricing

- *FIRST LEGO League Challenge* season competition set:
\$95 + \$15 S&H

2024-2025 Lego Kit Pricing

- LEGO® Education SPIKE™ Prime (includes both base and expansion sets, reusable): \$540 + \$20 S&H
- LEGO® Education SPIKE™ Essential (reusable): \$320+\$15 S&H
- LEGO® Education STEAM Park (reusable): \$220 + \$15 S&H

2024-2025 WI Tournament Costs

- FLL Discover & Explore Expo – Franklin High School – no cost
- FLL Challenge - \$170 / year (plus \$20 each if team advances to Sectional, and State tournament)

<https://www.badgerbots.org/wi-first-lego-league-team-info>

Other Team Expenses

- Team uniform (T-Shirts) – Approximate cost \$10/shirt
- Consumables – Poster boards, engineering notebooks, markers, tape, color print outs

**FIRST
LEGO
LEAGUE**

DISCOVER

**FIRST
LEGO
LEAGUE**

EXPLORE

**FIRST
LEGO
LEAGUE**

CHALLENGE

Approximate FLL Explore Season Costs:

- + \$145 Registration
- + ~\$80 Team Shirts
- + \$50 Consumables
- = \$275 total team cost
/ 8 kids = \$35 / child
(more per kid for smaller teams)

Approximate FLL Challenge Season Costs:

- + \$264 Registration
- + \$110 Field Set
- + \$170-\$210 WI Tournament
- + ~\$80 Team Shirts
- + \$50 Consumables
- = \$675-\$715 total team cost
/ 8 kids = \$85-\$90 / child
(more per kid for smaller teams)

Approximate FLL Discover Season Costs:

- + \$233 Registration cost
/ 8 kids = \$30 / kid
(more per kid for smaller teams)

- *Some employers will provide grants/sponsorships for FLL Teams. For example, Rockwell Automation will cover the first two charges (plus robot kit for rookie teams) for a team where an employee is a mentor.*



How do we get started?



- Tonight (or online in the next two weeks) at <https://FranklinFIRSTRobotics.org>
 - Volunteer to Mentor a team
 - Sign your kids up for a team
- Franklin FIRST Robotics has several FLL Discover STEAM Park kits, FLL Explore SPIKE Essential kits & FLL Challenge EV2 Robot kits available for teams to use at no cost.
 - *If your team is a new team, and has a mentor who works at Rockwell Automation, you will be eligible for a new robot kit at no cost to the team.*
- *Beginning mid-May, start at <https://firstinspires.org>*
 - *Mentors*
 - *Create an account*
 - *Register your team online*
 - *Invite parents to register their kids for your team*
 - *Order your 2024-2025 Season Field Kit*
 - *Parents*
 - *Register your kids, and accept invitation to join a team*
- *Schedule your Fall & Winter practices*
 - *One, 1-hour practice / week is recommended for FLL Discover teams (~10 weeks)*
 - *One, 1-2-hour practice / week is recommended for FLL Explore teams (~12 weeks)*
 - *Two, 2-hour practices / week are recommended for FLL Challenge teams (August-December)*
- *In the Fall (Sept or October), register for WI Tournaments at <https://www.badgerbots.org/wi-first-lego-league-team-info>*



What's Next?

- FRC explained by kids from Franklin Saber Robotics
 - Sub-teams
 - Competitions
 - Fundraising
 - Community Outreach
 - ...



Franklin **FIRST** Robotics



4K-5K



Grades 1-3



Grades 4-8



Grades 9-12



Networking & Q&A

<https://FranklinFIRSTRobotics.org>

