



# HOW IT WORKS

AGES  
12-18

GRADES  
7-12

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!

*FIRST*® Tech Challenge students work together with their mentors to design and build robots to compete in a dynamic and exciting challenge released every September. Teams program classroom-scale robots to follow autonomous commands before student drivers take control in two-on-two matches. On and off the field, students develop STEM (science, technology, engineering, and math) skills, engage in community outreach, practice engineering innovation, and build confidence to help them succeed.

## WHAT IT OFFERS:

- Design, build, and program robots using blocks-based or text-based coding and custom fabrication with 3D printing.
- Model a real-world engineering process.
- Apply math and science concepts.
- Develop strategic problem-solving, organizational, and team-building skills.
- Develop life skills, confidence, and resilience to build a better world.
- Compete at local and regional events, qualifying up to the *FIRST*® Championship. Earn awards based on teamwork, creativity, innovation, and the engineering design process.
- Gain access as participants and alumni to education and career discovery opportunities, connections to scholarships and employers, and a place in the *FIRST* community for life.
- Have fun as part of an engaged and supportive community.

## GET STARTED:

- Recruit up to 15 students and at least two adult mentors/coaches per team.
- Meet in schools, after-school programs, home schools, community groups, generally twice a week for 9-12 weeks.
- Use a reusable control system, materials, and parts to design and build a robot to compete in a *FIRST*-designed annual game.
- Attend exciting, sports-like events to earn awards and build community.
- Adaptable program can be used in and out of the classroom with easy-to-implement technology for schools, robot-building resources, and *FIRST* professional development options.

**"Everybody has to be able to participate in a future that they want to live for. That's what technology can do."**

— DEAN KAMEN, FOUNDER, *FIRST*

[www.firstinspires.org/ftc](http://www.firstinspires.org/ftc)





**FIRST doesn't just work, it is the gold standard.  
Proven impact on workplace skills\***



**87%** confidence in  
approaching problems in  
science and technology



**97%** persevere despite  
challenges or barriers



**98%** accept input and  
feedback from others

## SEASON OVERVIEW

### MAY

Registration for the  
season opens

### SEPTEMBER

Season Kickoff

### OCTOBER-MARCH

Local and regional  
competitive events

### APRIL

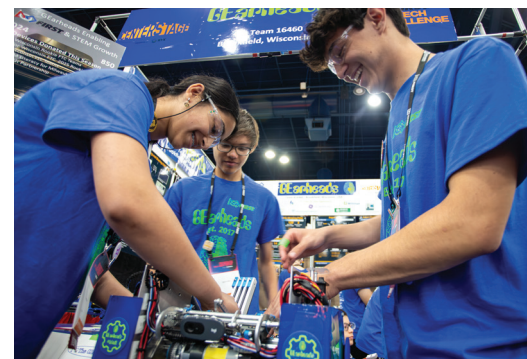
FIRST®  
Championship

FOR INFORMATION ABOUT FIRST IN YOUR AREA

[www.firstinspires.org/find-local-support](http://www.firstinspires.org/find-local-support)



FIRST® prepares young people for the future through a suite of life-changing youth robotics programs that build skills, confidence, and resilience. Because our programs are *More Than Robots*® students build self-confidence and collaborative problem-solving skills as they conduct research, fundraise, design, build, and showcase their achievements. Founded as a nonprofit organization in 1989 by inventor Dean Kamen, FIRST is backed by a global network of mentors, educators, volunteers, sponsors, families, alumni, and program delivery partners.



\*SOURCES: 2023 FIRST Tech Challenge end-of-season survey

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