




**FIRST**  
ROBOTICS  
COMPETITION

# HOW IT WORKS

AGES  
14-18\*

GRADES  
9-12

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!

Each year brings a new challenge for *FIRST*® Robotics Competition teams. With limited time and resources, they create their team identity, raise needed funds, and work with mentors to analyze and develop a strategy to compete via provided rules and guidelines. Team members design and build a competitive industrial-sized robot using sophisticated hardware and software technology to meet the challenge. Students experience real-world engineering and entrepreneurship. Each team competes for judged and competition awards at action-packed multi-day events with other teams.

*FIRST* Robotics Competition is a sport where all participants can choose to become a professional.



**“It’s like life. You never have enough information. You never have enough time. The kit of materials may be what you have in the warehouse. There are always people doing competing things and you must have a strategy. We’ve created a microcosm of the real engineering experience.”**

— WOODIE FLOWERS (1943 - 2019)  
FIRST DISTINGUISHED ADVISOR

#### WHAT IT OFFERS:

- It is a sport where participants play with and learn from the pros
- Designing and building a robot is a fascinating real-world professional experience
- Competing brings participants as much excitement and adrenaline rush as conventional varsity tournaments
- The game rules are a surprise every year
- Access to education and career discovery opportunities, connections to scholarships and employers, and a place in the *FIRST* community for life

#### GET STARTED:

- High-school-aged students from your school and/or community
- Adult mentors
- Financial sponsors
- A meeting place
- Tools
- Time
- Passion and dedication

[WWW.FIRSTINSPIRES.ORG/FRC](http://WWW.FIRSTINSPIRES.ORG/FRC)

\*Suggested ages



## PROVEN, VERIFIABLE IMPACT!\*



**83%** Express understanding of how science and technology can be used to solve real-world problems



**94%** Accept failure as part of learning



**77%** Express a sense of team identity and belonging

## SEASON OVERVIEW

### MAY

Registration for the season opens

### JANUARY

Season Kickoff and start of build season

### FEBRUARY-APRIL

Regional and district competitions

### APRIL

FIRST®  
Championship

### SUMMER/FALL

Off-season events and prep for next season

## FOR INFORMATION ABOUT *FIRST* IN YOUR AREA



Project-based, hands-on *FIRST*® programs introduce students to engineering and coding in an engaging, inclusive, and creative classroom or after-school learning environment where students work collaboratively to solve an annual robotics challenge. Boosted by a million-strong global community of students, mentors, educators, volunteers, sponsors, and alumni in over 100 countries, our PreK-12 programs are designed to inspire innovation and equip young people to build a better future.



\*FIRST. 2021 FIRST Robotics Competition End of Season Survey.

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