

FIRST® ROBOTICS COMPETITION



In INFINITE RECHARGESM, two alliances work to protect FIRST® City from approaching asteroids caused by a distant space skirmish

Each Alliance, along with their trusty droids, race to collect and score Power Cells in order to energize their Shield Generator for maximum protection. To activate sections of the Shield Generator, droids manipulate their Control Panels after scoring a specific number of Power Cells. Near the end of the match, droids race to their Rendezvous Point to get their Shield Generator operational in order to protect the city!



SCORING PERIODS

:15 Autonomous:

Droids follow pre-programmed instructions and Alliances score points by:

- Scoring Power Cells in the Power Port*
- Moving from the Initiation Line*

2:15 Driver-Controlled:

Drivers take control of the droids and Alliances scores points by:

- Continuing to score Power Cells in Power Port*
- Completing Rotation Control task*
- Completing Position Control task*
- Hanging from the Generator Switch*
- Getting the Generator Switch to the level position*



WELCOME SPECTATORS!

FIRST® is a robotics community that prepares young people for the future. The world's leading youth-serving nonprofit advancing STEM education outcomes, *FIRST* designs mentor-guided research and robotics programs for kids from pre-kindergarten through high school. Boosted by a global support system of mentors, coaches, volunteers, alumni, and sponsors, teams conduct research, fundraise, design, and build robots of their creation. For 30 years, students from all walks of life have developed self-confidence in STEM, meaningful friendships, and valuable, real-world skills through *FIRST* that open pathways and help young people build a better future.

AGES 6-10 **FIRST LEGO LEAGUE JR.**

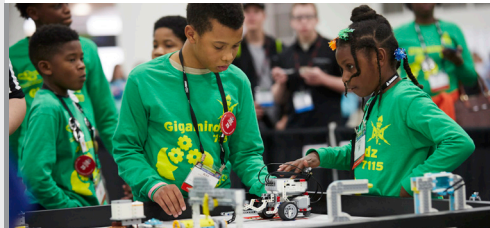


FIRST® LEGO® League Jr. teams build and program a model that moves using LEGO® Education WeDo 2.0 and present their research journey on a *Show Me* poster.

Students will:

- Learn about a real-world theme
- Explore challenges facing today's scientists
- Discover real-world math and science
- Begin developing teamwork skills
- Practice presentation skills
- Celebrate at noncompetitive events
- Engage in team activities guided by *FIRST*® Core Values

AGES 9-16* **FIRST LEGO LEAGUE**



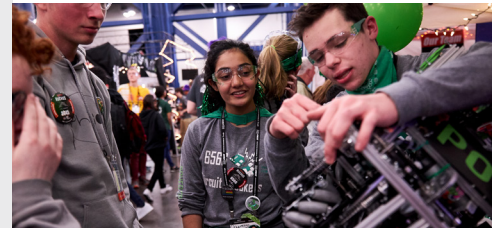
FIRST® LEGO® League teams build robots using LEGO® MINDSTORMS® technology and develop an Innovation Project based on a real-world Challenge that changes annually.

Students will:

- Create innovative solutions to challenges facing today's scientists
- Strategize, design, build, program, and test an autonomous robot
- Apply real-world math and science concepts
- Develop career and life skills, including critical thinking, time management, collaboration, confidence, and communication
- Participate in official tournaments and local events
- Engage in team activities guided by *FIRST*® Core Values

*Ages vary by country

AGES 12-18 **FIRST TECH CHALLENGE**

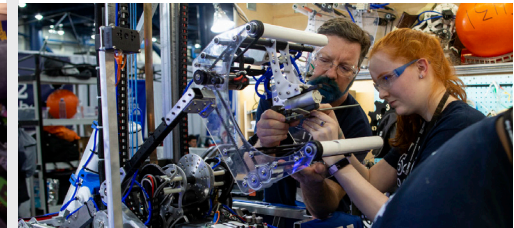


FIRST® Tech Challenge students learn to think like engineers. Teams build robots from a reusable kit of parts, develop strategies, document their progress, and compete head to head.

Students will:

- Design, build, and program robots
- Model a real-world engineering process
- Apply math and science concepts
- Develop strategic problem-solving, organizational, and team-building skills
- Build life skills while building robots and work towards participating in tournaments and *FIRST* Championship
- Compete and cooperate in Alliances at tournaments
- Access exclusive scholarships from hundreds of colleges/universities

AGES 14-18 **FIRST ROBOTICS COMPETITION**



FIRST® Robotics Competition teams compete with 120-pound robots of their own design, combining the excitement of sport with the rigors of science and technology.

Students will:

- Work alongside professional engineers
- Build and compete with a robot of their own design
- Learn and use sophisticated hardware and software
- Develop design, project management, programming, teamwork, strategic thinking, and *Coopertition*® skills
- Earn a place in the *FIRST* Championship
- Access exclusive scholarships from hundreds of colleges/universities



At the heart of *FIRST* are its Core Values, which emphasize the contributions of others, friendly sportsmanship, teamwork, learning, and community involvement. These include: *Gracious Professionalism*® – Respect for others, being a good sport, and sharing what you learn. *Coopertition*® – Competing hard, but also helping the other teams.