

Welcome SPECTATORS!

FIRST® Progression of Programs FIRST® is the world's leading child-serving nonprofit advancing science, technology, engineering, and math (STEM). For 30 years, FIRST has evolved into a global movement by engaging millions of people with a proven game-changer for preparing kids to solve the world's greatest problems. FIRST programs inspire innovation and leadership through engaging, hands-on robotics challenges developed to ignite curiosity and passion in students in grades K-12. FIRST builds powerful mentorship relationships between young people and STEM professionals, helping kids gain confidence to explore the innovation process while they learn valuable science, engineering, technology, teamwork, and problem-solving skills. FIRST creates the people who will change the world – today and tomorrow.



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.

Children, Ages 6-10 (Grades K-4), get to:

- 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



FIRST LEGO LEAGUE

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

Students, Ages 9-16* (Grades 4-8), get to:

- 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



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, Ages 12-18 (Grades 7-12), get to:

- 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



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, Ages 14-18 (Grades 9-12), get to:

- 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.

FIRST® Robotics Competition Game

In **DESTINATION: DEEP SPACE**, Presented by The Boeing Company, we join two competing alliances collecting samples on planet Primus. Unpredictable terrain and weather patterns make remote robot operation essential to their mission on the planet. With only 2:30 until liftoff, the alliances must gather as many cargo pods as possible and prepare their spaceships before the next sandstorm arrives.

2:30: A sandstorm limits driver visibility so robots independently follow pre-programmed instructions or are operated by human drivers via video from their habitat. Alliances score points by:

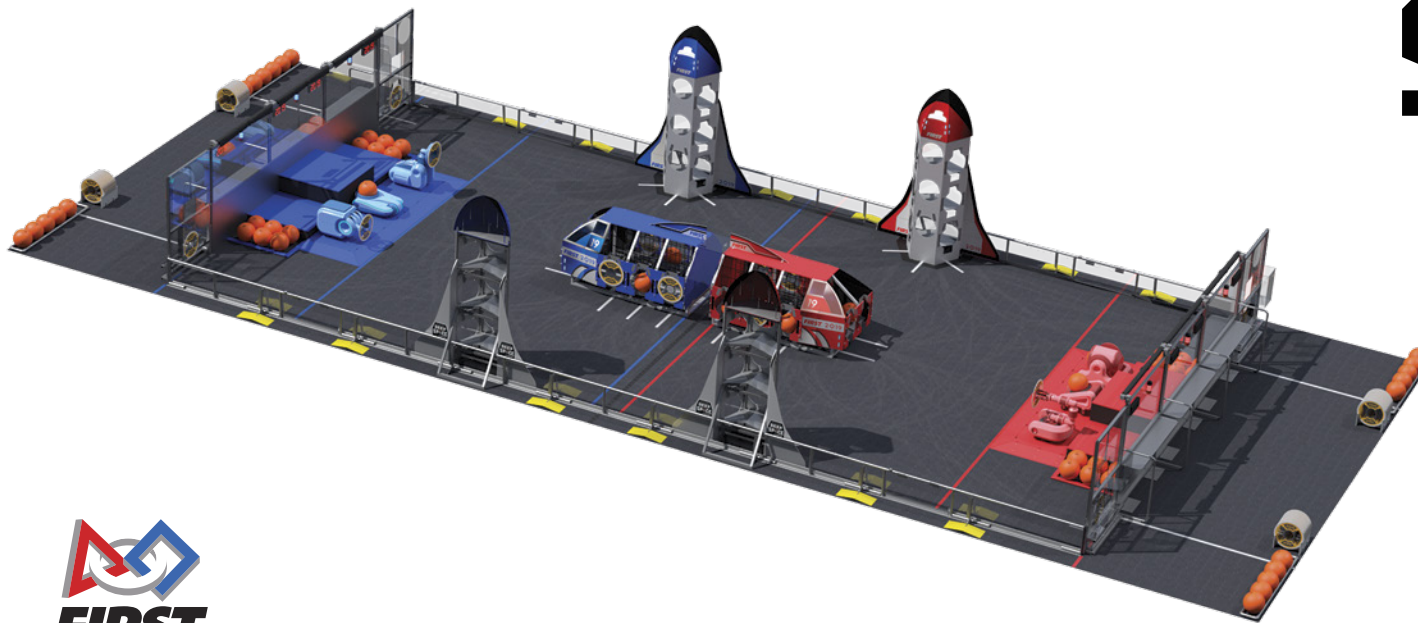
1. Deploying robots from habitat
2. Preparing rockets and cargo ship with hatch panels
3. Loading cargo pods into their rockets and cargo ship

2:15: The sandstorm clears and human operators take control of their robots. Alliances continue to score points by:

1. Preparing rockets and cargo ship with hatch panels
2. Loading more cargo pods
3. Returning the robot safely to the alliance's habitat

0:00: Rocket liftoff

The alliance with the highest score at the end of the match wins.



DESTINATION:
**DEEP
SPACE**

Presented By  **BOEING**

