

FIRST 101

The Bionic Tigers - FTC 10464



What is FIRST?

For Inspiration and
Recognition of Science
and Technology

FIRST Mission

- The mission of FIRST® is to inspire 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.

More than Robots

- “**FIRST is more than robots.** The robots are a vehicle for students to learn important life skills. Kids often come in not knowing what to expect - of the program nor of themselves. They leave, even after the first season, with a vision, with confidence, and with a sense that they can create their own future.”
- -Dean Kamen

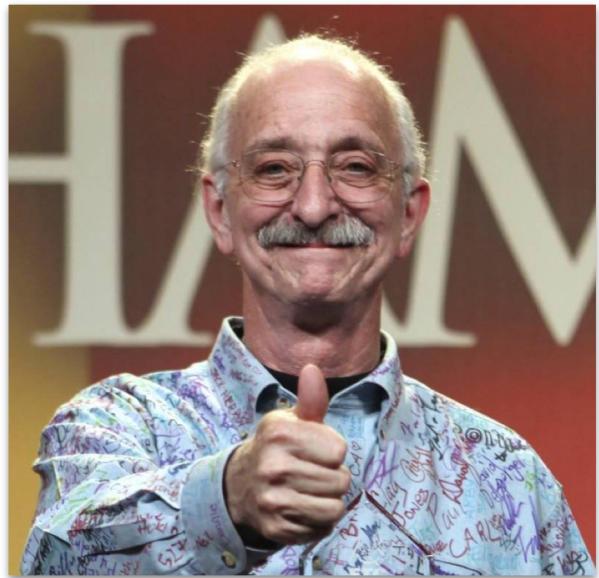
Dean Kamen

- American engineer, inventor, and businessman
- Cofounder of FIRST
- Inventor of the Segway



Woodie Flowers

- Mechanical engineering professor at MIT
- Cofounder of FIRST
- Founded the idea of
- “Gracious Professionalism” and “Coopertition”



What FIRST includes

**FIRST®
LEGO®
LEAGUE JR.**

**FIRST®
LEGO®
LEAGUE**

**FIRST®
TECH
CHALLENGE**

**FIRST®
ROBOTICS
COMPETITION**

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FIRST Lego League Jr.

- Ages 6-10
- Introduction of STEM
- Explore real-world theme and build a model of a solution to a problem
- Mechanize and program the solution with Lego EV3 or NXT parts
 - Example: the theme was water, a team built an irrigation system
- Create a “Show Me” poster to exhibit at an expo
- Reinforces students skills and values relating to: team work, critical thinking, researching, and communication.



FIRST LEGO League

- Ages 9-14
- Create and program an EV3 robot to complete objectives on field
- Research and create a project relating to problems in world
- Present in three judging rooms: core values, robot design, and project
- Big emphasis in the core values of FIRST Lego League
- Advancement is based on composite score



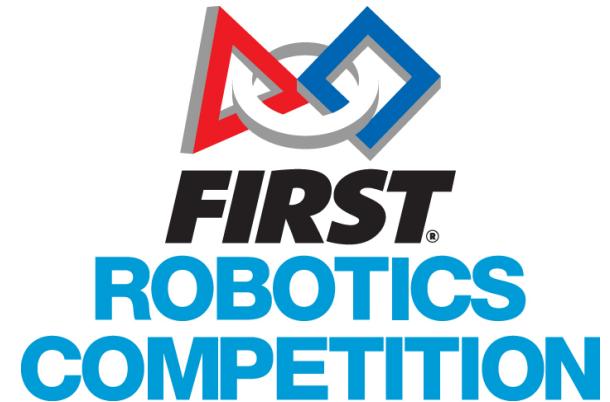
FIRST Tech Challenge

- Ages 12-18
- Challenge to design, build, program, and operate robots to compete in a head-to-head challenge in an alliance format (2 v 2)
- Emphasis on spreading STEM and FIRST through community, school, and world
- Present in one judging room to judges about their robot design, design process, programming, outreach, and the team's journey.
- Advancement is based on winning the competition or awards



FIRST Robotics Challenge

- Ages 14-18
- Under strict rules, limited time and resources, teams of students are challenged to raise funds, design a team "brand," hone teamwork skills, and build and program industrial-size robots to play a difficult field game against like-minded competitors. (3 v 3)
- Encouraged to spread STEM and FIRST through community, school, and world
- Advancement is whole winning alliance, Chairman's Award, and lottery



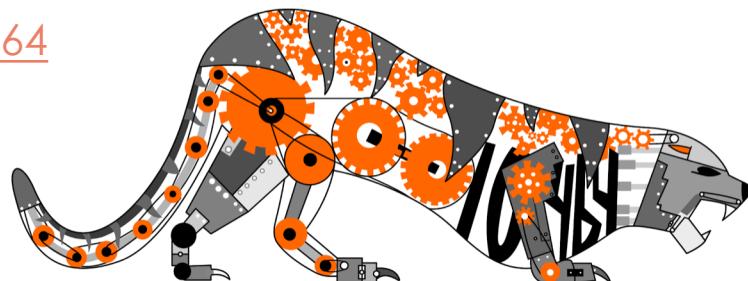
Etiquette

Gracious Professionalism

- Definition: demonstrating gracious attitudes and behaviors during competitions, respecting others and letting that respect show through actions, and making valued contributions in a way that is pleasing to others
- Why is it important to be gracious professionals at competitions?
 - Judges look for teams who show gracious professionalism for every award
 - It can preclude your team from being considered for awards
 - It builds respect for your team
 - It extends beyond your team - it applies to your supporters
- Give help and don't be afraid to ask for it! Cooperation over competition
- Practicing gracious professionalism in the presence of volunteers and respecting them is important
- Practice in everyday life too!

Credits

- This lesson was written by The Bionic Tigers 10464 for FTCTutorials.com
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