

Section

1



# Introduction

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## Section 1 – Introduction

### 1.1 – Overview

This section provides an introduction to *FIRST* and the *FIRST* Tech Challenge program.

### 1.2 – About *FIRST*

*“...to create a world where science and technology are celebrated... where young people dream of becoming science and technology heroes.”*

*FIRST* Founder, Dean Kamen

## *FIRST*

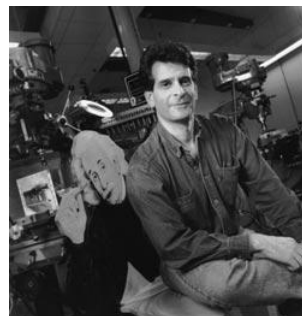
*FIRST* (For Inspiration and Recognition of Science and Technology) was founded by inventor Dean Kamen to inspire young people’s interest and participation in science and technology. Based in Manchester, New Hampshire, *FIRST* is a 501(c)(3) not-for-profit public charity.

A volunteer-driven organization, *FIRST* is built on partnerships with individuals as well as businesses, educational institutions, and government. Some of the world’s most respected companies provide funding, mentorship time and talent, and equipment to make *FIRST*’s mission a reality. As a team coach, you join over 80,000 committed and effective volunteers who are key to introducing close to 200,000 young people to the joy of problem solving through engineering.

*FIRST* provides four programs: the *FIRST* Robotics Competition (FRC) and the *FIRST* Tech Challenge (FTC) for high-school-aged young people, *FIRST* LEGO® League (FLL) for 9 to 14 year-olds, and Junior *FIRST* LEGO League for 6 to 9 year-olds. Also located at *FIRST* headquarters is the research and development facility called *FIRST* Place. *FIRST* Place is integral to game design, new program development, evaluation, and professional development of *FIRST* mentors.

**“We want to change the culture by celebrating the mind. We need to show kids that it’s more fun to design and create a video game than it is to play one.”**

**Dean Kamen,  
Founder, *FIRST***



Dean Kamen is President of DEKA Research & Development Corporation; a dynamic company focused on the development of revolutionary new technologies that span a diverse set of applications. As an inventor, physicist, and entrepreneur, Dean has dedicated his life to developing technologies that help people lead better lives. Dean’s proudest accomplishment is founding *FIRST*.

### 1.3 – What is the *FIRST* Tech Challenge?

*FIRST* Tech Challenge (FTC) is the newest addition to the family of *FIRST* programs. FTC grew out of a need for a mid-level robotics program to transition teams from *FIRST* Lego League to *FIRST* Robotics Competition. Piloted for two years as the *FIRST* Vex Challenge, FTC became an official *FIRST* program and was renamed *FIRST* Tech Challenge in 2007.

The FTC Competition Kit challenges students' creative problem-solving skills by enabling them to build robots that do amazing things. Students design and construct robotic devices which can be autonomously programmed or operator-controlled to perform various tasks that expand the boundaries of experimental intelligence.

*FIRST* Tech Challenge teams receive each year's game during a September Kickoff. The game's rules and regulations are provided on the [www.usfirst.org](http://www.usfirst.org) website. When you bring dedicated, enthusiastic students and a mentor together, the results can be phenomenal!

### 1.4 – Gracious Professionalism – A *FIRST* Credo

Dr. Woodie Flowers, National Advisor for *FIRST*, speaks about gracious professionalism in this way: “The *FIRST* spirit encourages doing high-quality, well informed work in a manner that leaves everyone feeling valued. Gracious professionalism seems to be a good descriptor for part of the ethos of *FIRST*. It is part of what makes *FIRST* different and wonderful.

*Gracious professionalism* can and should mean different things to each of us. It is possible however, to outline some of its meanings:

- Gracious attitudes and behaviors are ‘win-win.’
- Gracious folks respect others and let that respect show in their actions.
- Gracious professionals make a valued contribution in a manner pleasing to others and to themselves as they possess special knowledge and are trusted by society to use that knowledge responsibly.

In the long run, gracious professionalism is part of pursuing a meaningful life. One can add to society and enjoy the satisfaction of knowing that you have acted with integrity and sensitivity. That's good stuff!”

The *FIRST* Tech Challenge is a student-centered activity and is about giving students a unique and stimulating experience. We want students to learn the value of teamwork and to respect everyone's ideas and contributions to the team. *FIRST* values are about appreciating our differences and learning what those differences add to our lives. *FIRST* programs succeed most fully when team members bring the *FIRST* values they learn back to their communities.

### 1.5 – The *FIRST* Tech Challenge – 2008 Season

*FIRST* Tech Challenge teams will participate in the *FIRST Face Off!* challenge for the 2008 season. Each game match is made up of two distinct types of play – operator-controlled and autonomous. Each tournament features alliances of two teams playing side-by-side on the playing field. Teams will compete to score the most points by completing various tasks, including removing colored hockey pucks from a rack and placing them in various locations on the FTC field. Teams will be challenged

by traversing over rough and/or slippery terrain and will have to navigate off and on a ramp in the beginning and end of a match.

During an exciting build period, teams work as a group to overcome obstacles and meet challenges while learning from and interacting with their peers and adult mentors. Teams work together to build a robot that will be able to successfully complete the challenge set forth at Kickoff. Students come away with a greater appreciation of science and technology and how they might use it to positively impact the world around them. In addition, they cultivate life skills such as planning, brainstorming, collaboration, teamwork, leadership as well as research and technical skills.

Teams are allowed to compete in as many Tournaments as they would like but can only qualify to advance to the FTC World Championship at their first three events. The *FIRST* Championship Event in Atlanta, GA is an exciting event where teams from FTC, FRC, and FLL celebrate their accomplishments with other teams, family, and friends. Eligibility requirements for the FTC World Championship will be released after Kickoff on the [www.usfirst.org](http://www.usfirst.org) website.

