

For Inspiration and Recognition of Science and Technology

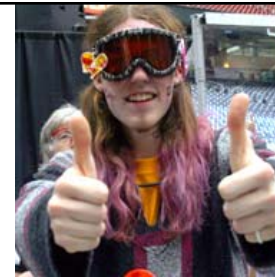
FIRST



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

Dean Kamen, Founder

FIRST



Vision

To positively transform culture by inspiring young people, their schools, and communities to appreciate science and technology.

Mission

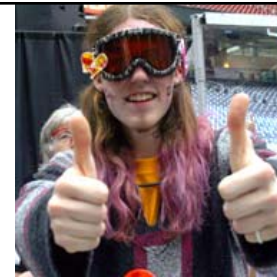
To design accessible, innovative programs that build not only science and technology skills and interests but also self-confidence, leadership, and life skills.



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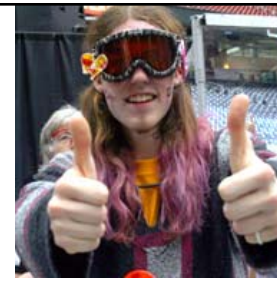
- » 501 (c) (3) not-for-profit organization
- » Founded 1989, by inventor Dean Kamen
- » Headquarters in Manchester, NH
- » Board chaired by John Abele, Founder Chairman of Boston Scientific
- » Executive Director Paul Shay
- » \$19 million operating budget



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FIRST Programs



- » **FIRST Robotics Competition (FRC)** for high-school-aged young people

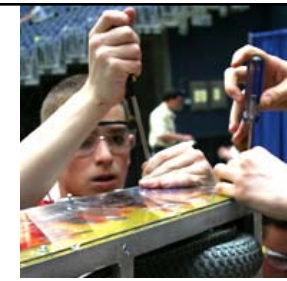
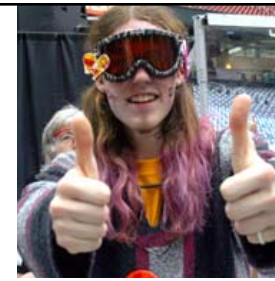
- » **FIRST LEGO® League (FLL)** for ages 9 to 14

- » Also:
 - » **FIRST Place**, an R&D facility and science & technology resource to the community
 - » **FIRST Vex Challenge**, a more accessible program for high-school-aged youth (pilot)
 - » **Junior FLL**, for ages 6 to 9 (pilot)



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The *FIRST* Experience



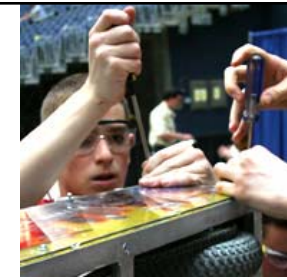
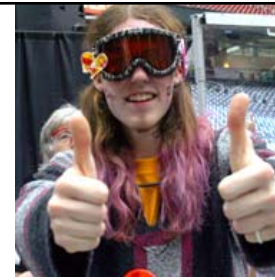
“...It’s like life. You never have enough information. You never have enough time. The kit of materials is what you have in the warehouse. There are always competing things and you must have a strategy. We’ve created a microcosm of the real engineering experience.”

Woodie Flowers
MIT Professor &
FIRST National Advisor



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How It Works

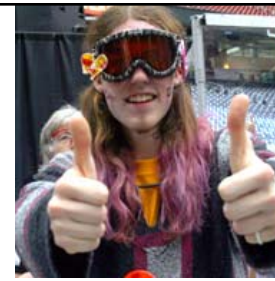


- » “Sport for the mind,” combining the excitement of sport with science and technology
- » Problem solving and creativity with new challenges every year
- » Teams of young people with mentors
- » A tight timeline to learn efficiency and effectiveness
- » A value system based on “gracious professionalism”
- » Competition “co-opetition” with peers
- » Hard fun



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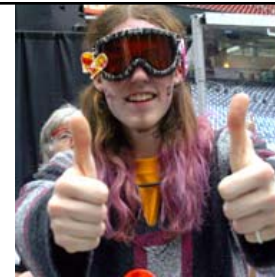
FIRST Robotics Competition

- » January season kickoff
- » New game each year
- » Common kit of parts
- » 6-week build period



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How It Works

FIRST LEGO® League

- » Robotics competition and project based on real-world challenge:
 - » Mission Mars 2003
 - » No Limits 2004
 - » Ocean Odyssey 2005

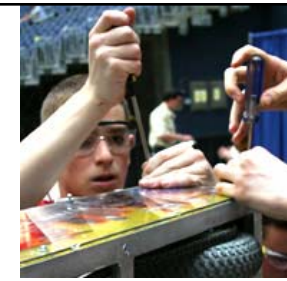
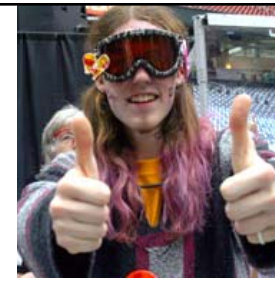
- » 8-week build period starting in September

- » Robots built using LEGO MindStorms™ technology



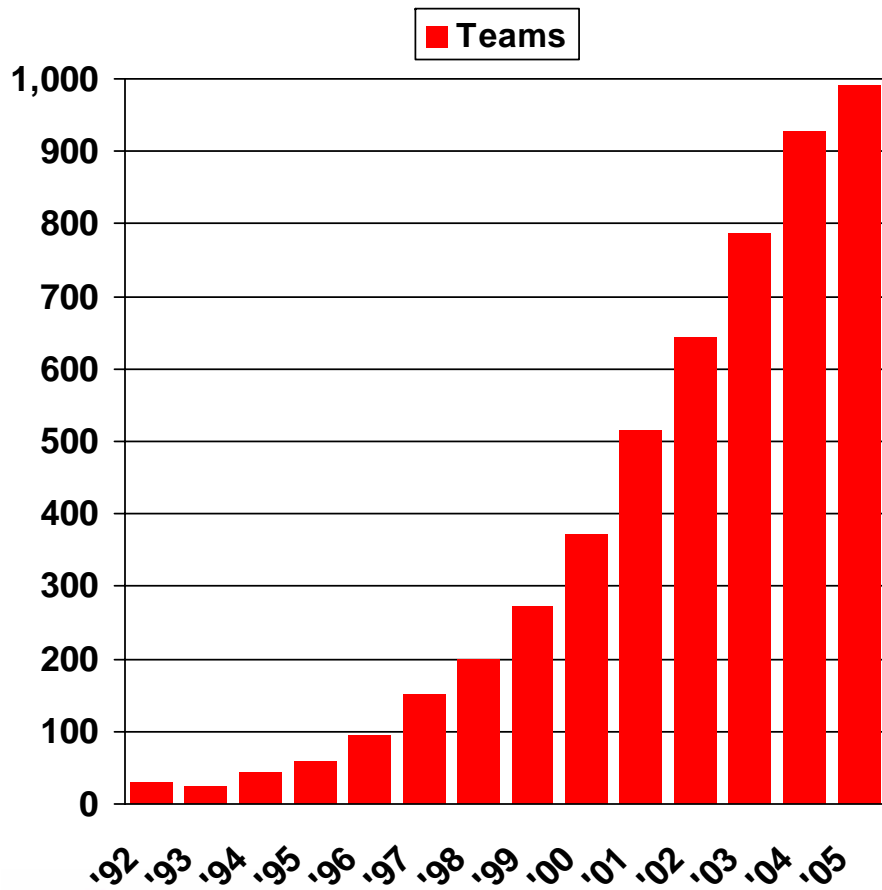
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Growth

FIRST Robotics Competition

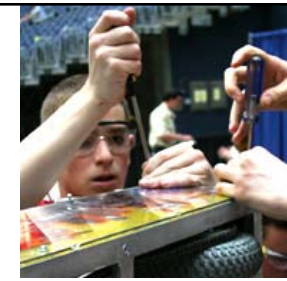
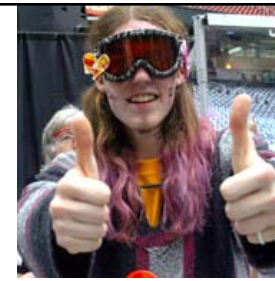


- » **25,000 young people** (up from 21,000 previous year)
- » 74% male / 26% female
- » 31% minority
- » 991 teams
- » 30 regional competitions
- » 340 teams advance to FRC Championship

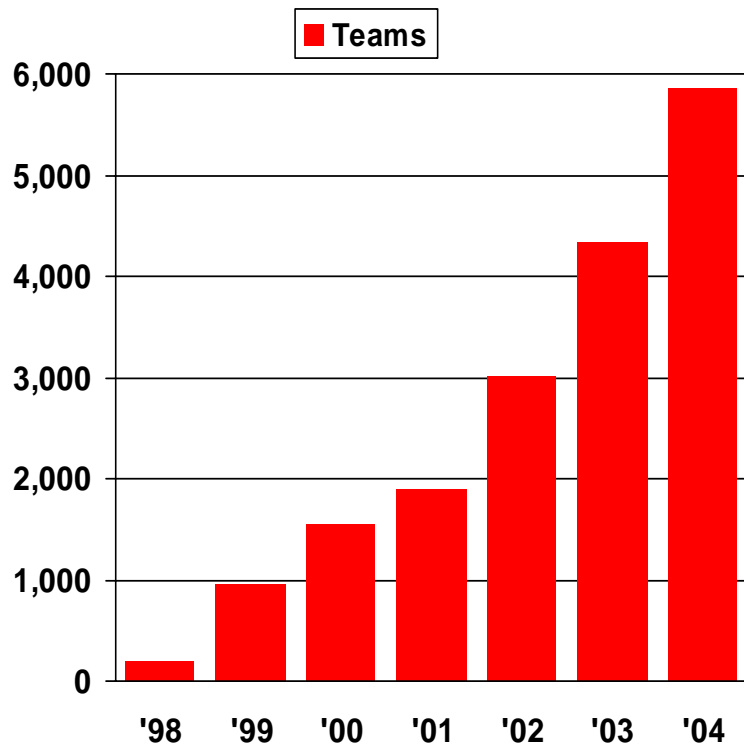


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Growth



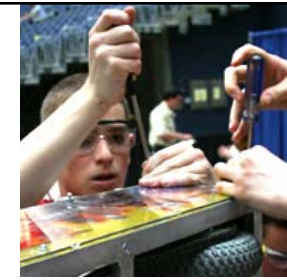
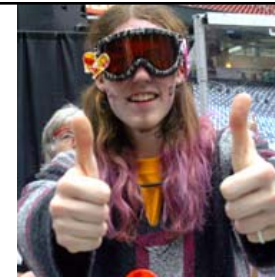
FIRST LEGO® League

- » **Over 48,500 young people** (up from 36,000 previous year)
- » 70% male / 30% female
- » 5,859 teams in over 20 countries
- » Over 300 qualifying events
- » 69 tournaments
- » 75 teams advance to FLL World Festival
- » In partnership with The LEGO® Group



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Global Reach

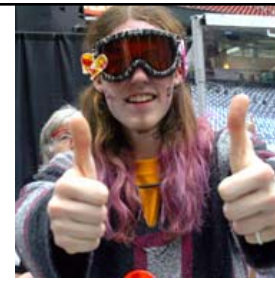
- » More than 73,000 participants
- » 40,000 volunteers, including 25,500 mentors
- » Presence across the US and in over 20 countries



	Teams	FRC	FLL
Total		989	5,859
US		905	3,870
Austria, Italy, Germany & Switzerland			170
Brazil		6	100
Canada		62	130
China			500
Ecuador		1	
France			81
Israel		12	46
Japan			19
Mexico		1	18
Netherlands			74
Scandinavia (Denmark, Norway & Sweden)			393
Singapore			100
South Africa			22
South Korea			130
Turkey			25
UK		2	181

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Impact

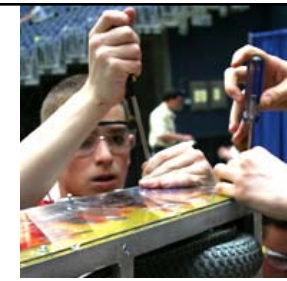
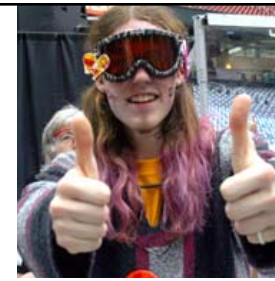
FIRST Robotics Competition

- » 2005 study
- » Conducted by Brandeis University
- » FRC alumni from mainly low-income, urban schools
- » Comparison group: students with similar backgrounds in high-school math and science



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2005 FRC Study Findings

FRC Alumni were:

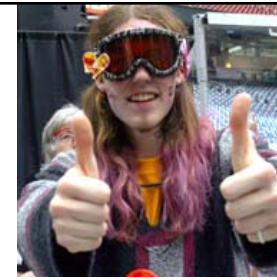
- » nearly twice as likely to major in science or engineering (55% vs. 28%)
- » more than three times as likely to major specifically in engineering (41% vs. 13%), and they majored in engineering at roughly seven times the average among US college students overall
- » more than twice as likely to expect to have a science or technology-related career after college (45% vs. 20%)
- » more than twice as likely to have participated in some form of community service in the past year (71% vs. 30%)
- » significantly more likely to think it is important to "be a leader in their community" (44% vs. 29%)



Source: FRC Evaluation, Brandeis University, February, 2005

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Impact

FIRST LEGO® League

In an 2004 evaluation of FLL, Brandeis University found:

- » 94% of coaches reported an increase in students' understanding of how science and technology can be used to solve problems

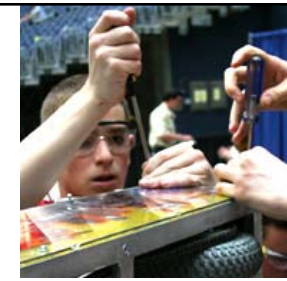
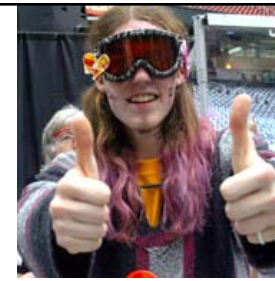
- » Among participants:
 - » 93% wanted to learn more about computers and robotics
 - » 88% wanted to learn more about science and technology
 - » 77% reported increased interest in having a job that uses science or technology when they are older



Source: FLL Program Study by Center for Youth and Communities, Brandeis University, May 2004

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Case History

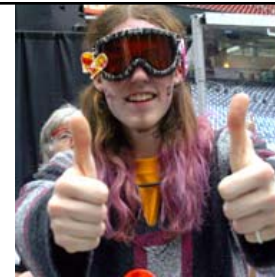
East Technical High School, Cleveland, OH

- » Enrollment from 900 to 1,400
- » Attendance rates from 60% to 82%
- » *FIRST* team (including 5 young women) all graduated, all received scholarships
- » *“Just 5 years ago...an urban school...slated for closing. We’ve become the science / engineering magnet school... More students try out for FIRST team than football and basketball combined.”*

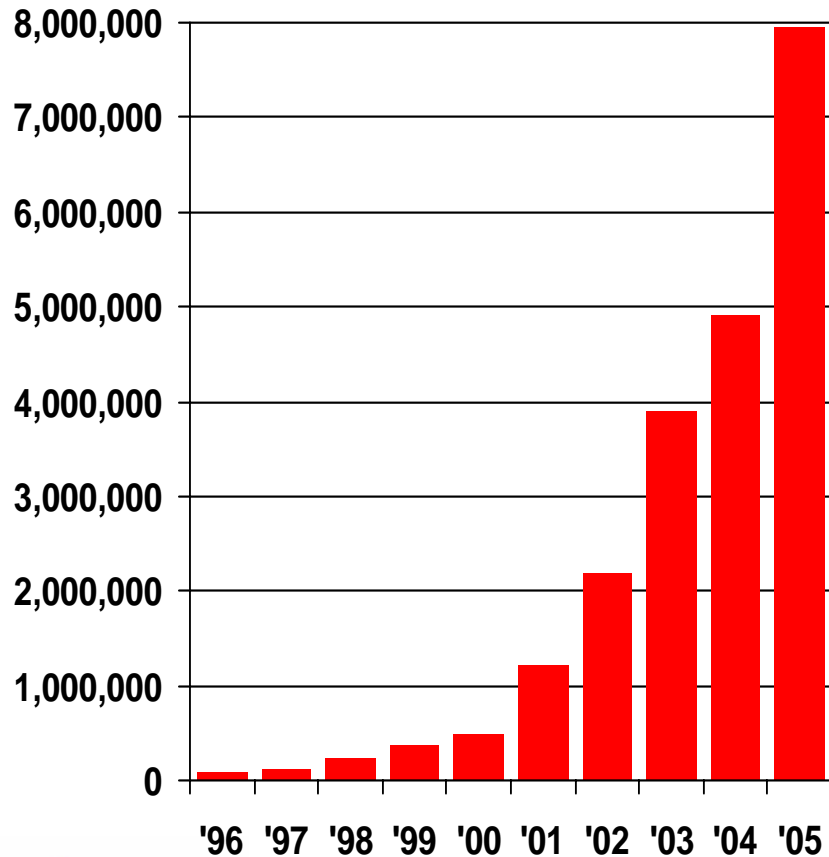


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Scholarships

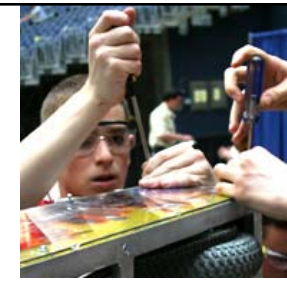
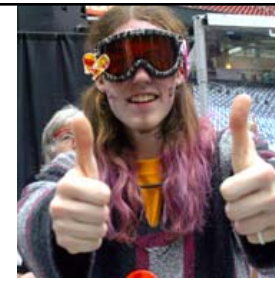


Close to \$8 million in scholarship awards are available to *FIRST* participants, provided by leading universities, professional associations, and corporations.



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Sponsors

Over 2,000 leading corporations, foundations & agencies, including:

“We believe getting kids involved in science and technology is good for everyone. And it certainly feeds our pipeline for future engineers.”

Al Canton, Executive Director of
General Motors Proving Grounds &
Test Operations, General Motors



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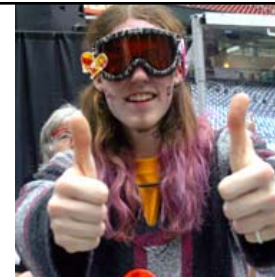


FedEx®

 **RadioShack**®

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Sponsors

“FIRST is a wise investment for BAE Systems because it energizes tomorrow's scientists, engineers, and leaders. That's good for the individual student, the community, and the nation.”

Galen Ho, President,
Information & Electronic
Warfare Systems,
BAE Systems North America

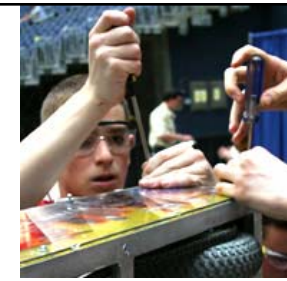
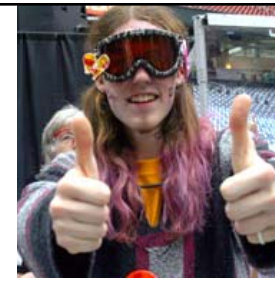
“FIRST isn't just about building robots, it's about developing life skills. The kids learn skills in relationships, teamwork, finance, fundraising, budgeting, and project management. The partnership between academia, the community, and industry ... will build our future employees and future citizens.”

Steve Sanghi
CEO, Microchip Technology

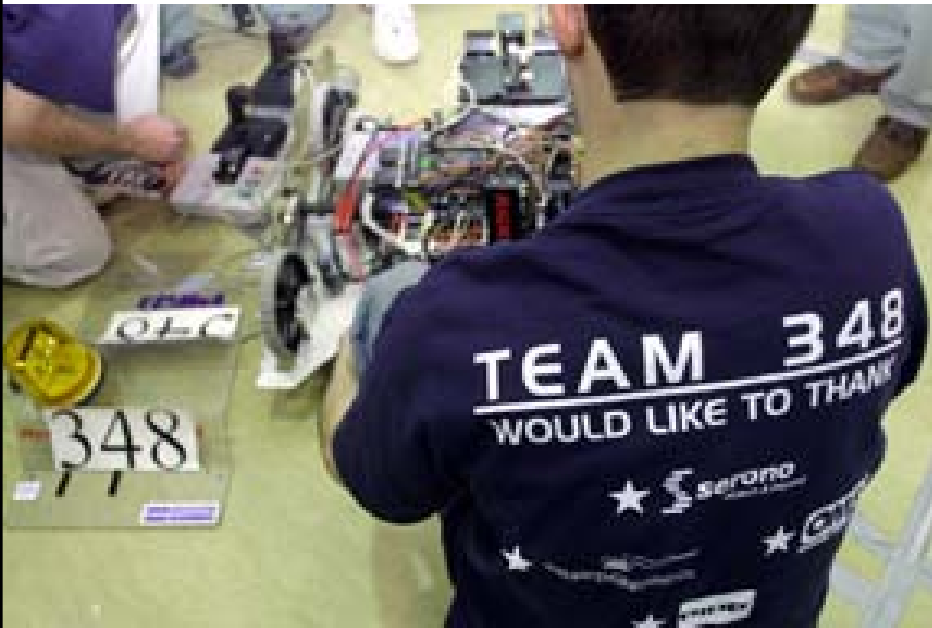


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Ways to be Involved



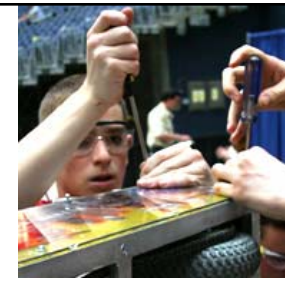
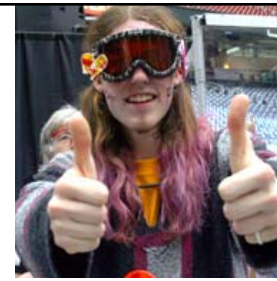
- » **Provide financial support**
 - » To *FIRST*
 - » To events
 - » To teams
 - » For a specific purpose, such as the *FIRST* Underserved Initiative
- » **Provide equipment for FRC kit of parts**
- » **Provide facilities for teams & event**
- » **Involve employees**
 - » As mentors to teams
 - » As volunteers at events
 - » As consultants to *FIRST*
- » **Offer scholarships**
- » **Provide internships**
- » **Customized approach**



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Advantages for Sponsor



- » Innovative way to play leading role in important cause relevant to sponsor's business
- » Strengthens reputation & community relations
- » Builds technological literacy
- » Pipeline for interns and future employees
- » Motivating volunteer opportunities for employees
- » Applied professional development in project management, leadership, and teamwork for employees

