



FIRST LEGO® LEAGUE

Presented by

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FIRST



"... to create a world where science and technology are celebrated..."

...where young people dream of becoming science and technology heroes..."

Dean Kamen, Founder of FIRST

What is *FIRST*?

For **I**nspiration and **R**ecognition of **S**cience and **T**echnology



- 501 (c) 3 not-for-profit organization
- Founded in 1989 by inventor Dean Kamen
- Headquarters in Manchester, NH
- *FIRST* Robotics Competition for high-school-aged young people
- *FIRST* LEGO League for 9-14 year olds*
- *FIRST* Place R&D facility and science & technology resource to the community

* Ages 10-16 outside North America



FIRST Robotics Competition



- Combines the excitement of sport with science and technology
- Creates a unique varsity sport for the mind
- High-school-aged young people discover the value of education and careers in science, technology and engineering

FIRST LEGO League



Helps children, ages 9 to 14, discover the fun in science and technology while building self-confidence, knowledge and life skills

"I want to build things nobody else has even thought of yet."
Charles Peterson, FLL Team Member (10 years old)

What is FLL?

An international program created through a partnership between *FIRST* and the LEGO Group

- **INSPIRES** children, ages 9 to 14, to participate in science and technology
- **ENGAGES** kids in playful and meaningful learning
- **PROVIDES** a fun, creative, hands-on learning experience
- **CHALLENGES** kids to solve real-world problems using robotics
- **TEACHES** children to experiment and overcome obstacles
- **BUILDS** self-esteem and confidence



How it Works

PROBLEM SOLVING AND CREATIVITY

- Present kids with a real-world problem
- New challenge each year

TEAMS OF STUDENTS AND MENTORS

- Work as a team
- Learn with adults and mentors

DO IT ALL IN 8 WEEKS

- Building, programming, testing, investigating solutions
- Competing with peers in high-energy tournaments
- Presenting solutions to a real-world problem to a panel of judges



FLL Teams

- **APPLY** math and science concepts to research, design, build and program autonomous robots
- **USE** LEGO MINDSTORMS™ technologies
- **GAIN** hands-on experience solving real-world problems
- **LEARN** from and interact with adult mentors
- **WORK** as a group to overcome obstacles and meet challenges

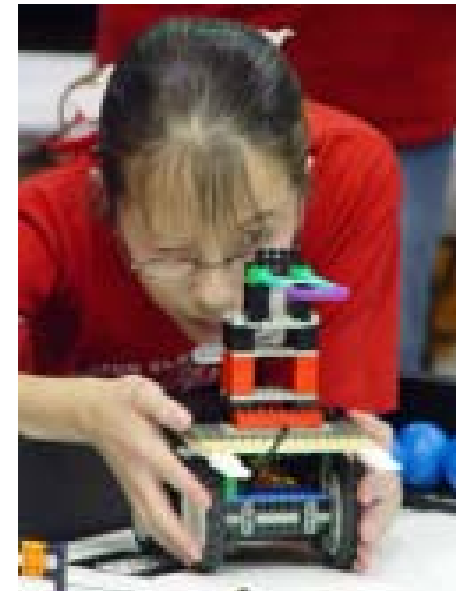




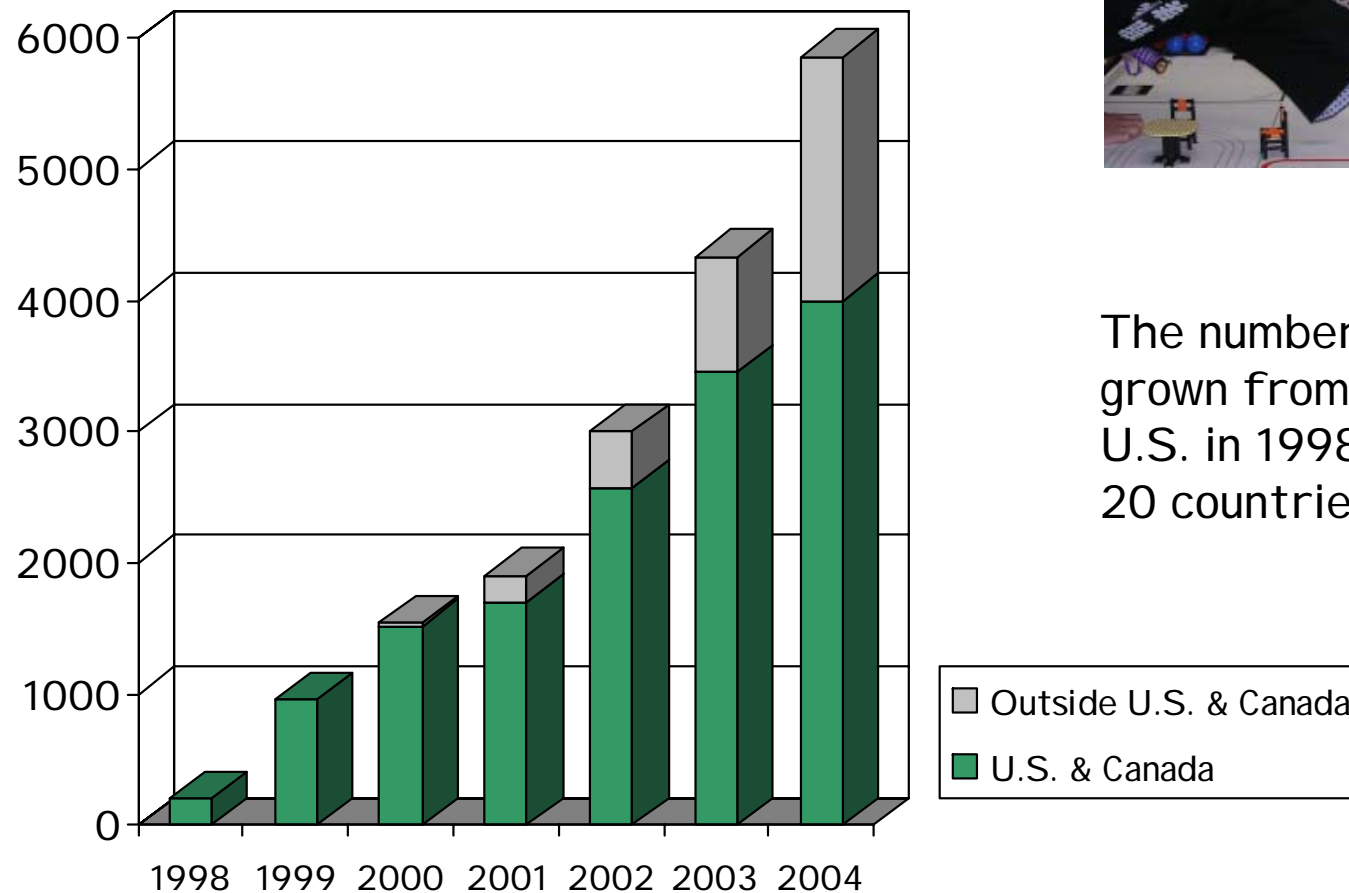
2004 No Limits Challenge

FLL teams find ways to help people with different levels of physical ability by:

- **EXPLORING** how technology and human thought can work together to create access for all
- **BUILDING & PROGRAMMING** a robot to address the specific needs of people who face physical challenges
- **RESEARCHING & PRESENTING** robotics technology solutions to help individuals in their community

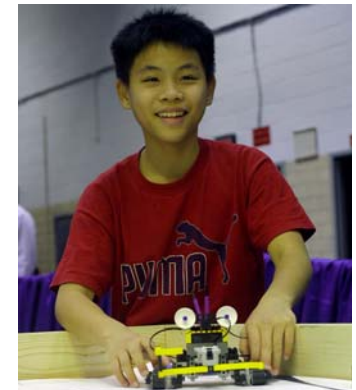


FLL Impact: Growth



The number of FLL teams has grown from 200 teams in the U.S. in 1998 to 5,859 teams in 20 countries in 2004



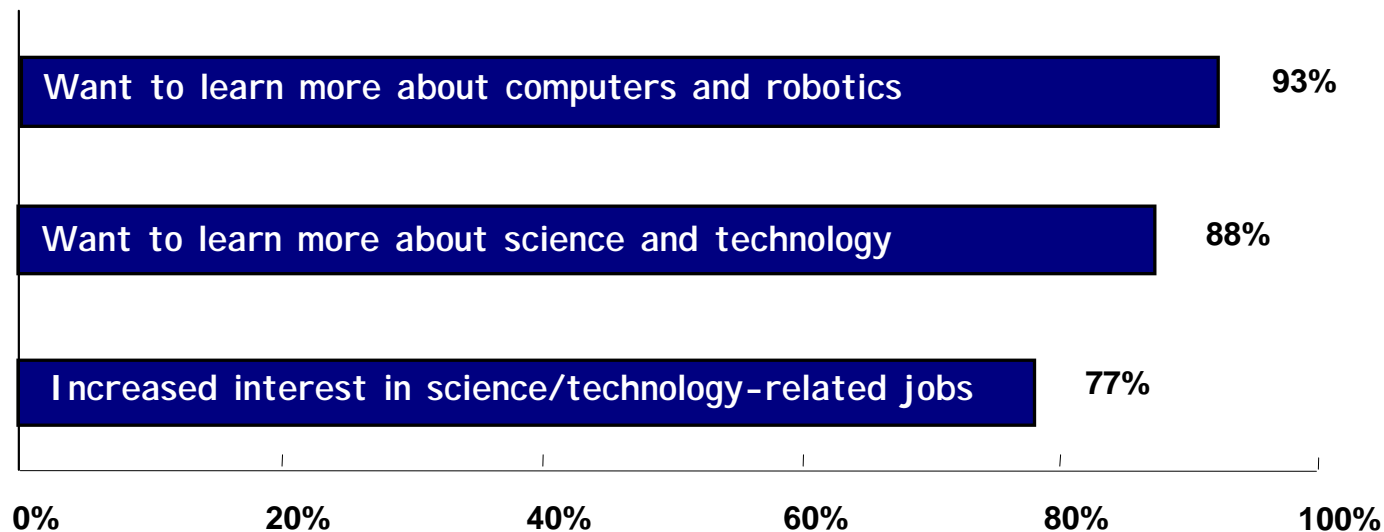


FLL Impact (Coach Perspective)

In a 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:



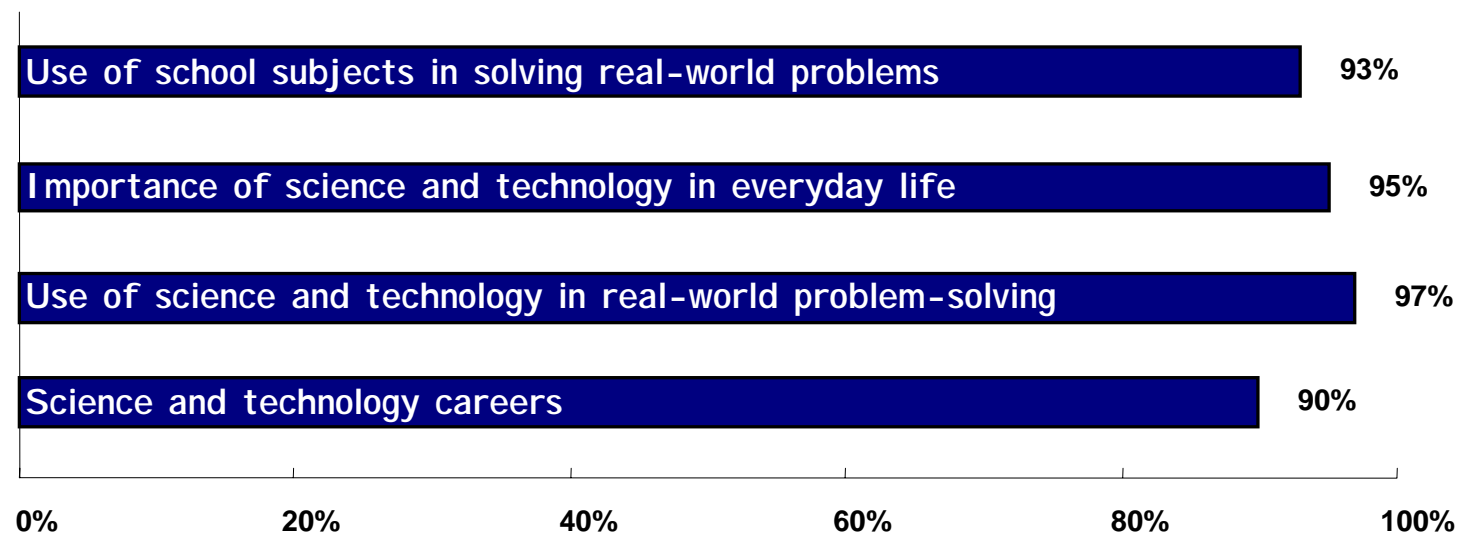
Source: FLL Program Study by Center for Youth and Communities, Brandeis University, May 2004



FLL Impact (Student Perspective)

In the 2004 evaluation of FLL, Brandeis University also found:

Increased knowledge of:





Get Involved: Teams

Up to 10 children, ages 9 to 14, and at least one adult coach

ORGANIZATIONS

Any group can create a team: schools, community groups, churches, neighborhoods...

COST

\$600 for new teams, \$300 for returning teams

FLL SEASON

May - September ----- On-line registration
Mid-September ----- Challenge is revealed
October - November --- Building season
November - January ---- Tournament season
April ----- World Festival



Get Involved: Teams

In a 2004 evaluation of FLL participants, Brandeis University found:

- 98% reported had **fun** working on their FLL team
- 93% rated their experience '**good**' or '**excellent**' (31% good, 63% excellent)
- 82% plan to **participate again** (11% will be too old; 5% report no time)



Get Involved: Sponsors

FIRST SPONSORSHIP

- Builds technological literacy
- Strengthens company reputation in the community
- Provides renewed inspiration to company engineers and employees
- Engages employees in volunteerism opportunities
- Provides employee team building and training opportunities



Get Involved: Sponsors

BECOME A SPONSOR

- Provide financial support to teams
- Involve employees as mentors, coaches and/or volunteers
- Provide equipment, facilities and/or training
- Help host a tournament for your community



"FLL enables us to be a player in the community. The kids enjoy it and our employees get a kick out of it as volunteers. The feeling is that we're all in this together."

Tom Pirelli, Chairman, ArialPhone Corporation

Get Involved: Volunteers

BECOME A VOLUNTEER

- Help kids discover the fun in science and technology
- Have a positive impact on the lives of children
- Help celebrate science and technology
- Network with like-minded professionals
- Be inspired and energized through your participation
- Have fun



"There's something about changing a young person's life and giving them direction that keeps me going."

General Motors FIRST Volunteer



Get Involved: Volunteers

Everyone has something to contribute to FLL

OPPORTUNITIES

- Mentor or coach a team
- Volunteer at an FLL event
- Judge
- Coordinate a team
- Help with fundraising
- Recruit new teams



Get Involved: Mentors

BECOME A MENTOR

- Empower children with a sense of accomplishment
- Provide valuable one-on-one interaction
- Be respected and admired by team members
- Be inspired and energized through your participation



"I love working with these kids! I'm amazed and inspired by what they can accomplish, and their enthusiasm and energy is contagious."

Kristen Kelso, FLL Coach and Judge, former *FIRST* Robotics Competition participant

Get Involved: Schools

OPPORTUNITIES

- Spread the word about FLL
- Encourage parents to form teams
- Provide space for teams to work
- Be a tournament site
- Help mentor/coach a team
- Bring FLL into the classroom



"I have been teaching for 31 years and this is one of the best programs I have ever seen!"

David Mills, Technology Education Teacher

Get Involved: Universities

OPPORTUNITIES

- Host an FLL tournament for the community
- Recruit students to mentor/coach teams
- Recruit volunteers
- Contact local elementary and junior high schools
- Get the word out to alumni



Next Steps

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"If you create an environment in which the right Stuff is celebrated, incredible things can happen."

Woodie Flowers, MIT Professor and *FIRST* National Advisor