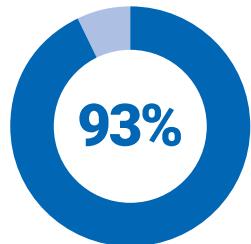
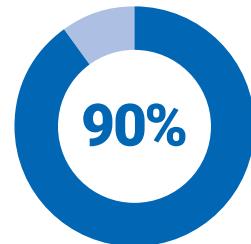


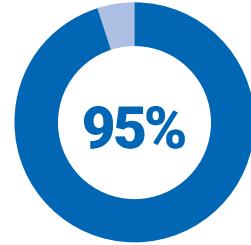
## Gains in Workforce Skills

FIRST participants show significant gains in workforce skills such as teamwork, communication, and problem-solving.

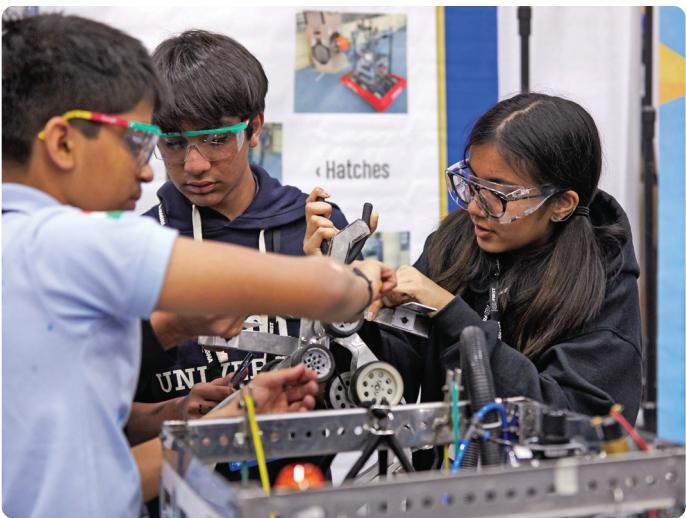
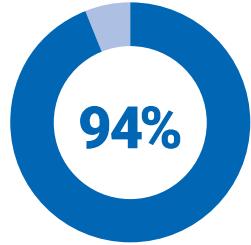
**COMMUNICATION**  
90% of students reported gains    **CONFLICT RESOLUTION**  
93% of students reported gains



**TIME MANAGEMENT**  
95% of students reported gains



**PROBLEM-SOLVING**  
94% of students reported gains



*"FIRST has given me life skills and tools to work well with others and be a team player and always do my personal best with Gracious Professionalism.® These are skills I will use in my daily life and beyond!"*

## Essential skills students build with FIRST

Children have always been innovative, but this generation of young people is unlike any other. Having the world at their fingertips has increased their curiosity beyond what is readily available to them. Imagine the growth possibilities with programs that celebrate their natural curiosity, combined with mentors to guide them through new opportunities.

**1. Critical Thinking and Problem Solving**

**2. Collaboration**

**3. Adaptability**

**4. Innovative Thinking**

**5. Entrepreneurship**

**6. Communication**

**7. Accessing and Analyzing Information**

**8. Curiosity and Imagination**



## CREATE LASTING IMPACT WITH FIRST.

Learn more at [www.firstinspires.org/school-engagement](http://www.firstinspires.org/school-engagement)

\*All differences statistically significant, p < .05. SOURCES: FIRST Longitudinal Study: Findings at 84-Month Follow-Up, Brandeis University, March, 2021; Brandeis University, 2011 FIRST® Tech Challenge – FIRST® Robotics Competition Evaluation and 2013 FIRST® LEGO® League Evaluation

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# Choose FIRST® for Your Students

IGNITE YOUNG MINDS. INSPIRE INNOVATION. CREATE LASTING IMPACT.



PreK-12 FIRST® programs support educators by engaging students in STEM (science, technology, engineering, and math) learning and preparing them for the future through hands-on fun while cleverly helping kids transfer classroom concepts to real-world applications.

## FIRST® PROGRAMS

- **Inspire** your students to be lifelong learners by making learning relevant and fun.
- **Excite** students in project-based STEM activities through robust robotics programs deliverable in and out of the classroom.
  - Teach coding and the scientific method through hands-on projects.
  - Apply math and science to real-world problems.
  - Teach the engineering and design process through mechanical design and build.
- **Expose** students to new interests.
- **Integrate** student-directed, problem-based learning to build innovation skills and strategic thinking.
- **Cultivate** 21<sup>st</sup> century work-life skills.
- **Encourage** Gracious Professionalism®, a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.
- **Create** a community of collaborative problem-solvers.

## SUPPORTING EDUCATORS

### **FIRST** programs align to national educational standards

**FIRST** curriculum and program guidebooks are developed using a project-based learning pedagogy. Students gain knowledge and skills through engaging in complex questions or problems and investigating solutions. Content is designed to meet specific STEM learning outcomes through connected learning objectives. This allows **FIRST** content to be embedded or integrated to promote learning in a variety of contexts.

### **FIRST** provides implementation resources for educators

**FIRST** resources and professional development prepare educators and facilitators to guide their students as they begin or continue a journey of STEM exploration using real-world scenarios and challenges:

- Grants to assist with funding
- Mapping programs to meet the Common Core State Standards, Next Generation Science Standards, and 21<sup>st</sup> Century Learning Skills
- Curriculums that provide authentic, real-world learning to students
- Detailed facilitator guides
- Preparation modules, webinars and other educational and in person Partner trainings



## MORE THAN ROBOTS<sup>SM</sup>

### Create equitable, lasting impact

**FIRST** is the world's leading youth-serving nonprofit advancing STEM education. Founded by renowned inventor Dean Kamen in 1989, **FIRST** has reached more than 2.5 million youth participants in more than 100 countries.

Backed by a global network of mentors, coaches, volunteers, alumni, and sponsors, **FIRST** offers a PreK-12 suite of hands-

on, team-based robotics challenges that welcome all participants at any level regardless of prior STEM knowledge.

**FIRST** programs use strategic, evidence-based techniques to maximize student engagement and conclude with celebratory events showcasing what students learn and accomplish.

**2.5M**  
Youth participants  
in more than 100 countries.

### Build **FIRST** Core Values

**FIRST** goes beyond preparing your students for higher education and careers by creating an inclusive learning environment where students discover their purpose at an early age and persevere through challenges. As a result, your students will also boost their self-confidence, communication, and leadership skills and learn how to transfer those skills to life outside the classroom.

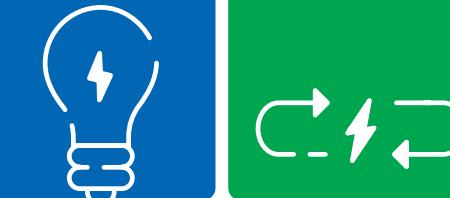
#### Discovery

We explore new skills and ideas.



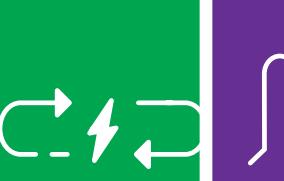
#### Innovation

We use creativity and persistence to solve problems.



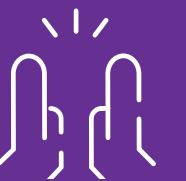
#### Impact

We apply what we learn to improve our world.



#### Inclusion

We respect each other and embrace our differences.



#### Teamwork

We are stronger when we work together.



#### Fun

We enjoy and celebrate what we do!



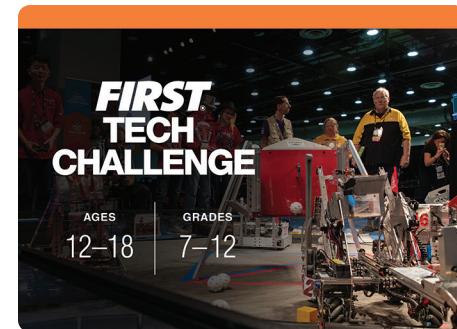
## HANDS-ON PREK-12 STEM LEARNING PROGRAMS



### **FIRST**® LEGO® League

GRADES PREK-8

**FIRST**® LEGO® League introduces STEM to children through fun, exciting hands-on learning. Participants gain real-world problem-solving experiences through a guided, global robotics program, helping today's students and teachers build a better future together. **FIRST** LEGO League's three age-appropriate divisions inspire youth to experiment and grow their critical thinking, coding, and design skills through hands-on STEM learning and robotics.



### **FIRST**® Tech Challenge

GRADES 7-12

**FIRST**® Tech Challenge students learn to think like engineers. Teams design, build, and program robots to compete in an alliance format against other teams. Robots are built from a reusable platform, powered by Android technology, and can be coded using a variety of levels of Java-based programming.



### **FIRST**® Robotics Competition

GRADES 9-12

**FIRST**® Robotics Competition teams design, program, and build a robot starting with a standard kit of parts and common set of rules to play in a themed head-to-head challenge. Teams also create a team identity, develop community partnerships for support, and work to promote STEM in their local community.

## FIRST IMPACT

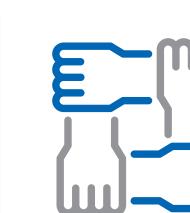
**FIRST** has a proven impact on youth participants in shaping their futures in STEM. Research from a multi-year longitudinal study\* shows **FIRST** is advancing its mission to increase the number of students interested in STEM – and that interest is influencing their educational and career choices.

### **FIRST** students are prepared for greater success in the classroom and workforce.

At **FIRST**, we understand that interest, rather than academic proficiency, is a greater predictor of children pursuing studies and careers in STEM fields. Our evidence-based programs use strategies known to increase student interest and engagement in STEM, including:



#### HANDS-ON LEARNING



#### WORKING AS A TEAM ON REAL-LIFE PROBLEMS



#### EXPOSURE TO CAREERS AND ADULT MENTORS



#### EMPHASIS ON **FIRST** CORE VALUES



#### CULMINATING IN A CELEBRATION WHERE STUDENTS CAN SHOWCASE WHAT THEY CREATED AND LEARNED

### Benefits of **FIRST**

**FIRST** students are two times more likely to show an increase in STEM-related attitudes and interests than comparison group students.

Positive impacts are evident for all **FIRST** students regardless of race, gender, income, or community type.

**FIRST** STUDENTS ARE SIGNIFICANTLY MORE LIKELY TO SHOW GAINS IN STEM OUTCOMES THAN COMPARISON STUDENTS

**2X**

STEM Interest  
STEM Career Interest  
STEM Knowledge

STEM Activity  
STEM Identity

\*"X" = times as likely

