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## **FIRST Profile**

**What:** A 501c3 organization that provides accessible, innovative programs for elementary, middle and high-school age students that build not only science and technology skills and interest, but also self-confidence, leadership and life skills. *FIRST's* goal is to inspire in young people, their schools, and communities an appreciation of science, technology, engineering and mathematics and to show them how an understanding of these fields can enrich their lives.

**Who:** *FIRST's* Board of Directors is composed of leaders in business and technology from companies like Boston Scientific Corporation, Xerox, General Motors, Johnson & Johnson, BAE Systems, and Bausch and Lomb. In addition to partnerships with professional associations such as IEEE, ASME, FPDA, and SWE, *FIRST* has alliances with organizations such as Boys and Girls Clubs of America, Girls, Inc., and Girl Scouts of America to further strengthen its youth development emphasis. Today *FIRST* engages approximately 37,000 high school students, 158,000 middle and elementary-school-age students, 85,000 volunteers and over 3,500 corporate sponsors. *FIRST* draws from every state in the U.S. as well as from Brazil, Canada, Chile, Israel, Mexico, the Netherlands, and the U.K. Overall, *FIRST* participants include: 74% male and 26% female; 16% African American, 5% Hispanic, 2% Native American, 3% Pacific Asian & Asian Indian/Middle Eastern, and 10% other minorities.

**Why:** American schools are far behind their counterparts in other industrialized nations in helping students learn mathematics and sciences. Too often, students are not encouraged to participate in their own learning, they do not work often enough as teams, they have insufficient opportunities for "hands-on" learning with mentoring support by real-life practitioners in the sciences, and they do not learn how to solve problems. Decreasing numbers of youth are interested in pursuing careers in science and technology, and there is a looming shortage of scientists and engineers. The vitality of the United States, which is in large part due to the productivity of well-trained people and the steady stream of scientific and technical innovations they produce, is endangered. Without innovative workers who pioneer discovery and new technology, our economy will suffer and our citizens will face a lower standard of living.

**How:** Students within 4 programs work in teams (small "companies") with adult mentors to design, build and program robots from a standard set of parts in a set time to meet a common challenge. Season-culminating events allow teams to test their robots, teamwork, strategies, and individual mettle in a high pressure environment, give them a chance to learn from other teams, and provide an opportunity to celebrate their accomplishments. The program also runs in the off-season with workshops, local competitions, community outreach and mentoring of other students.

**Results:** A study funded by the Ford Foundation and completed by Brandeis University in 2005 found that *FIRST* participants went on to college at a higher rate than average high school graduates (89% vs. 65%), were nearly twice as likely to major in science or engineering (55% vs. 28%), were more than twice as likely to expect to have a science or technology-related career (45% vs. 20%), and were more than twice as likely to have done community service in the past year (71% vs. 30%). *FIRST* has grown over the past 19 years from one program with 28 high-school teams to four programs with an anticipated 2009 total of over 17,500 teams of young people.

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*FIRST* (For Inspiration and Recognition of Science and Technology) is a 501(c)(3) not-for-profit public charity.

