



2017-2018 80+ Super Amazing Young Engineers: K-12 from 27 different schools.

**WANTED: K through 12<sup>th</sup> Graders Interested in Technology, Communications, and Engineering.**

TechBrick, formed in early 2003, is an independent robotics and STEM education club for home-schooled, public, and private school students, K-12, in Harford, Baltimore, and Cecil counties. TechBrick is completely run by volunteers.

This year we have more than 100 active registrations from more than 36 schools and homeschools with weekly meetings of children and parents (who are encouraged to stay and participate). You can see some of what we've been doing at <http://www.techbrick.com>. Our teams have participated in numerous championships both regionally and at World's.

**Why this program is critical to our nation's future:** The club runs under a program called FIRST, founded in 1989 by Dean Kamen (of Segway Scooter fame) and Woodie Flowers from MIT. Their goal was to create a program in which young students, with a strong interest in technology and engineering, could get the same type of encouragement that students get in organized sports. We offer all four the US FIRST programs spanning K-12 as well of off season activities.

**GO HERE FOR FULL INFORMATION:**

<http://form.techbrick.com/registration> or call Marco at 410-838-8264

**There are no prerequisites.** We are looking for students, ages 5 through high school seniors, eager to learn engineering at all levels, willing to focus on a very complex task, and engage in building a world-class robot and team. Our facility now features 3D printers, computer aided design machines, and range of related tools and technology. No previous skills or training are required.

**There are modest dues for each program.**

**The FIRST program and competitions provide one of the best platforms for young people to get excited about the challenges and rewards of engineering:** They are pushed to the limit on every level: project management, design, research, testing, strategic- planning, and more. In the coming years many of our participants will be the future technical leaders, providing the innovative solutions we need to maintain our competitive edge.

**READY FOR THE CHALLENGE OF YOUR LIFE?**

<b>JrFLL: Jr. FIRST LEGO League (5-7 years)</b>	<b>FLL: FIRST LEGO League (8-13 years)</b>
<b>Meets on a regular schedule.</b> Additional nights during season (Sept through March). 6-10 meetings in homes.	<b>Meets every Tuesday night at APG.</b> Additional nights during season (Sept through March)
Uses the annual theme for project-based work.	Uses annual themes to engage young students in applied research with LEGO robotics.
<a href="http://www.firstinspires.org/robotics/flljr">http://www.firstinspires.org/robotics/flljr</a>	<a href="http://www.firstinspires.org/robotics/fll">http://www.firstinspires.org/robotics/fll</a>
<b>FRC: FIRST Robotics Competition (9<sup>th</sup>-12<sup>th</sup> grades)</b>	<b>FTC: FIRST Tech Challenge (7<sup>th</sup>-12<sup>th</sup> grades)</b>
<b>Both programs meet every Tuesday night at APG.</b> Additional nights during season.	
<b>Season runs from late August through end of June.</b> Key commitment time is Jan-April with one meeting per week and additional meetings close to competitions. FRC requires about 40% more time.	
<b>Large, complex robots weighing up to 120 pounds that compete on basketball size court, six at a time.</b> A sophisticated materials-handling challenge that requires teams to corral, manipulate, score in cooperation with other teams. FRC teams use advanced robotics and building techniques to design and construct large, complex robots using a wide array of industrial tools and resource. FRC includes a substantial outreach and communications effort that includes publications, speaking, and photography/video.	<b>Smaller robots, 18" cube at start that compete on a 12x12 foot field, with two alliances of two robots.</b> A sophisticated materials-handling challenge that requires teams to corral, manipulate, score in cooperation with other teams. FTC Teams use a new TETRIX robotics system and advanced robotics and building techniques to design and construct smaller, complex robots using a wide array of industrial tools and resource.
Both programs make extensive use of machine-shop skills and programming in C and/or LabView.	
<a href="http://www.firstinspires.org/robotics/frc">http://www.firstinspires.org/robotics/frc</a>	<a href="http://www.firstinspires.org/robotics/ftc">http://www.firstinspires.org/robotics/ftc</a>