



## SPAWAR Grooms Future STEM Pros at LEGO Robotics Competition

By SPAWAR Public Affairs

SAN DIEGO – These may be the droids you’re looking for.

Young robotics wizards filled the Eastlake High School gym here Nov. 15 for the FIRST LEGO League of Southern California qualifying round.

The event for aspiring science, technology, engineering and math (STEM) professionals was sponsored by the Space and Naval Warfare Systems Center Pacific (SSC Pacific).

The program is designed to expose elementary and middle school students to real-world engineering challenges and to solve them by creating LEGO robots.

Twenty-four teams composed of seven to 10 students were presented with a competition theme – this year being Trash Trek, which involved recycling and environmental engineering. From there, the teams researched the associated challenges, designed robots to solve problems and tested their creations on a thematic playing surface.



**Captain Kurt Rothenhaus (center), SSC Pacific’s commanding officer, gets the inside scoop from a competing team’s project design.**

FIRST LEGO League, or FLL, is designed for students ages 9 to 14. In addition to the game score, the teams are also judged in robotic design and programming; core values and teamwork; and an associated research project.

“Our nation has been home to many of the biggest technological and scientific advancements in history,” explained Capt. Kurt Rothenhaus, SSC Pacific’s commanding officer. “The Navy relies on technology every day and to keep our technological edge we need to inspire the next generation of civilian scientists and engineers to follow in the footsteps of our many pioneers at SSC Pacific.”

According to Wanda Parise, SPAWAR’s robotics outreach coordinator, “We have a great investment in the students around San Diego County. We consistently have between 50 and 60 SPAWAR coached or mentored robotics teams.”

One of the volunteers at the competition, MD Rana, has participated in six previous command-sponsored engagements. The key to success, the SSC Pacific computer scientist believes, is to “Engage students with STEM and keep them hooked. STEM teaches beyond acquiring knowledge

and equips students with critical and logical thinking, problem-solving and creative skills, which are the foundations for success in college and careers.”

Parise noted that the SPAWAR-sponsored tournament, with more than 60 volunteer judges, referees, mentors and coaches, contributes to the expanding number of teams in the Southern California FLL region.

“That number has increased dramatically from under 100 teams in 2009-2010 to 401 this 2015-2016 season. Our volunteers typically volunteer for other robotics tournaments such as the regional championship at LEGOLAND.”

And on to the Dec. 5-6 regional championship it is for eight teams emerging from the weekend competition.

“I believe the most important take-away for the students was how to work through a tough problem step-by-step together,” said Parise, who was also an FLL coach for seven years.

“With this hands-on learning, they acquired life skills like dissecting a problem, trouble-shooting, strategic planning, communication, presentation/speaking skills and teamwork besides the building, programming and project research,” she said.

As a leading Navy command dedicated to delivering cyber, engineering, space and network capabilities, SPAWAR is dedicated to helping develop the next generation of U.S. STEM professionals.



SSC Pacific employees Daniel Gonzales, seated, and MD S. Rana field questions at the "Ask me a question - I'm an engineer" booth.

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Volunteer referee Marcos Mora, an SSC Pacific software engineer, debriefs competitors following their robot's performance.