Campolindo Robotics Team Sends Designs to International Space Station

By Zoe Portnoff



The Campolindo Robotics Team sporting "Made In Space" T-shirts.

Nup a new name for themselves within the scientific community: Generation Mars. With exciting new developments such as zero gravity 3D printers, scientists have reason to look hopefully toward the future of space exploration and technology. At Campolindo High School, students in the Robotics Club can be found directly contributing to these advancements. Campolindo students are acting as a pilot group for Space Games, a program launched by Made In Space. In this program, students have been designing a game to be 3D printed in the International Space Station.

creator of Space Games, first approached Campolindo teachers revolutionary manufacturing techabout the program in 2014, and began working with the Robotics Club in September 2015. The Campolindo Makers Club was also involved in creating the earlier designs. "It was actually going to be a competition between multiple schools, but it ended up being just our school that would be creating a design for the first year," explained

Space Games proved to be a dif- manufacturing process is really imin Space Games ficult but fun challenge for the Ro- portant and impressive," Ray Al-

D ecently, millennials have taken botics Club. The design was limited to certain dimensions, and small loose parts were not allowed due to safety hazards. In addition to fulfilling these requirements, Campolindo students hoped to create a game that could only be played in space. "It's difficult trying to make a game for outer space when all you've ever known is a 1G environment for games. All of our earlier designs were things we've played on Earth with slight variations," Coates noted. Altenberg added, "Our program will hopefully inspire students to pursue engineering careers where they are able to learn and contribute to the production of things not nec-Mary Jo "MJ" Marggraff, the essarily just in space, but in 3D printing in general, which is a really nology."

> Made In Space, the company that launched Space Games, created the first 3D printer able to operate in zero gravity, which was sent up to the International Space Station on Sept. 21, 2014. The company hopes that this new technology will accelerate space development and enable the future of space exploration.

"The ability to construct from Bennett Coates, co-captain of the club. "We first made a lot of one material almost infinitely many sketches, but now we are going to devices and objects is really incredmake a rough model and 3D-print it ible, especially in space, where we on Earth, and the final model is have a really limited number of regoing to be printed on the ISS by the sources. Having the ability to pro- Award at the Intel Folsom Qualifier, Made In Space printer." duce things without a huge a FTC competition, for their efforts

Photos Zoe Portnoff

tenberg, co-captain of the Robotics Club, explained. "While our project doesn't have a necessarily practical application, the brainstorming and the effort that goes into developing such a product is similar to the work that goes into creating more essential items. The concept behind this challenge is that we have to come up with something that would be interesting on, say, a trip to Mars, which would take two to four years. The idea that you could have someone on earth design these things for you, send a file to you, and then you could have the object even though you're millions of miles away in space is pretty fantastic."

Campolindo's Robotics Team is also currently participating in First Tech Challenge, or FTC, a nationwide competition in which students in grades 7-12 design, build, program, and operate robots to work with or against other teams to complete a certain task. "Bad hardware made our season far more troublesome than expected, but we still finished with six awards and accomplished a lot," Altenberg said about the season.

Campolindo's Robotics Club was created in 2005, making this season its 10th year participating in First Tech Challenge. Recently, the Campolindo team won the Judges'



Summer @ Saklan Your passport to the world!



better live lean

I went from 30% to 18% body fat in 11 Weeks

I knew I'd reached a critical point when my scale registered a weight I hadn't seen since I was pregnant. Living Lean helped me take control and get back on-track fast. I feel healthier, stronger and happier. -Emily Gorin, Oakland

Personal Training, **Nutrition and Group Classes**

Call (925) 360- 7051

Two locations: Orinda and Lafayette **Read Client Testimonials at** www.livingleanprogram.com

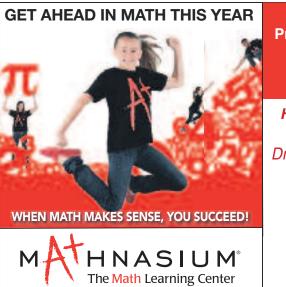


in Lafayette

living lean



The Campo Robotics Team hard at work



GRADES K-12

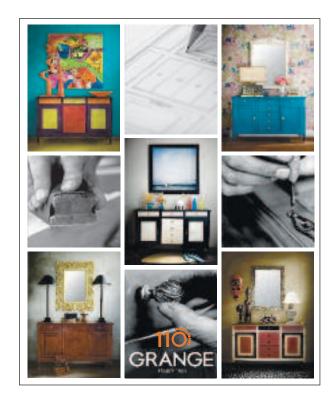
Pre-Algebra · Algebra 1 & 2 · Geometry **Pre-Calculus & Calculus SAT/ACT Preparatory Individualized Instruction**

HOMEWORK HELP FOR ALL LEVELS Flat Monthly Fee Drop-in any time, no scheduling needed!



3435 Mt. Diablo Boulevard, Lafayette (Golden Gate Way at Mt. Diablo Blvd.) (925) 283-4200 www.mathnasium.com





Please visit us and see our new arrivals!

Interior Design • Gifts • Rugs Home Accents • Lighting • Reupholstery **Custom Window Coverings**

Indigo & Poppy 1009 Oak Hill Road, Lafayette 925-962-9201 www.indigoandpoppy.com Hours: 10:00am - 5:30pm Monday - Saturday, Closed Sunday

10