

CVUSD students are innovative...



Don Lugo High senior Abby Lopez (right) explains how her team designed a device that can program a trash can to roll to the curb at a specific time. Other team members (not pictured) are Levi Torres and Angel Avalos.

Don Lugo High engineering academy students show off their senior projects

A trash can that can be programmed to roll itself to the curb, a multi-functional ladder with electrical outlets for power tools, and a sturdy case that can turn a smart cell phone into an extreme sports video tool were among the projects demonstrated this spring by seniors in the Don Lugo High engineering academy.

The projects represent 70 percent of each senior's grade, said Brian Engstrom, coordinator and teacher of the Lugo Engineering and Design (LEAD) Academy. The students have been working on the projects since November in teams of up to three people. The LEAD teams brainstormed ideas for the project, documented their work in online portfolios, researched patents to make sure they are not

duplicating a current product, and designed and built a prototype. They are allowed to build a prototype that improves on a current product, Engstrom said.

The projects were displayed for the public on May 17 in the Chino Valley Unified School District Board of Education room in Chino. Industry experts were invited to attend the trade show-like event to give students feedback on the projects. The students accepted the information and will decide if any revisions are necessary to their projects, Engstrom said.

Other projects displayed on May 17 included a toilet seat that goes up after use, a soccer glove that helps players have a better grip, bookshelves with a collapsible desk in the middle, a comb that dispenses hair gel, and a small unmanned aircraft that can take off more quickly than current products.

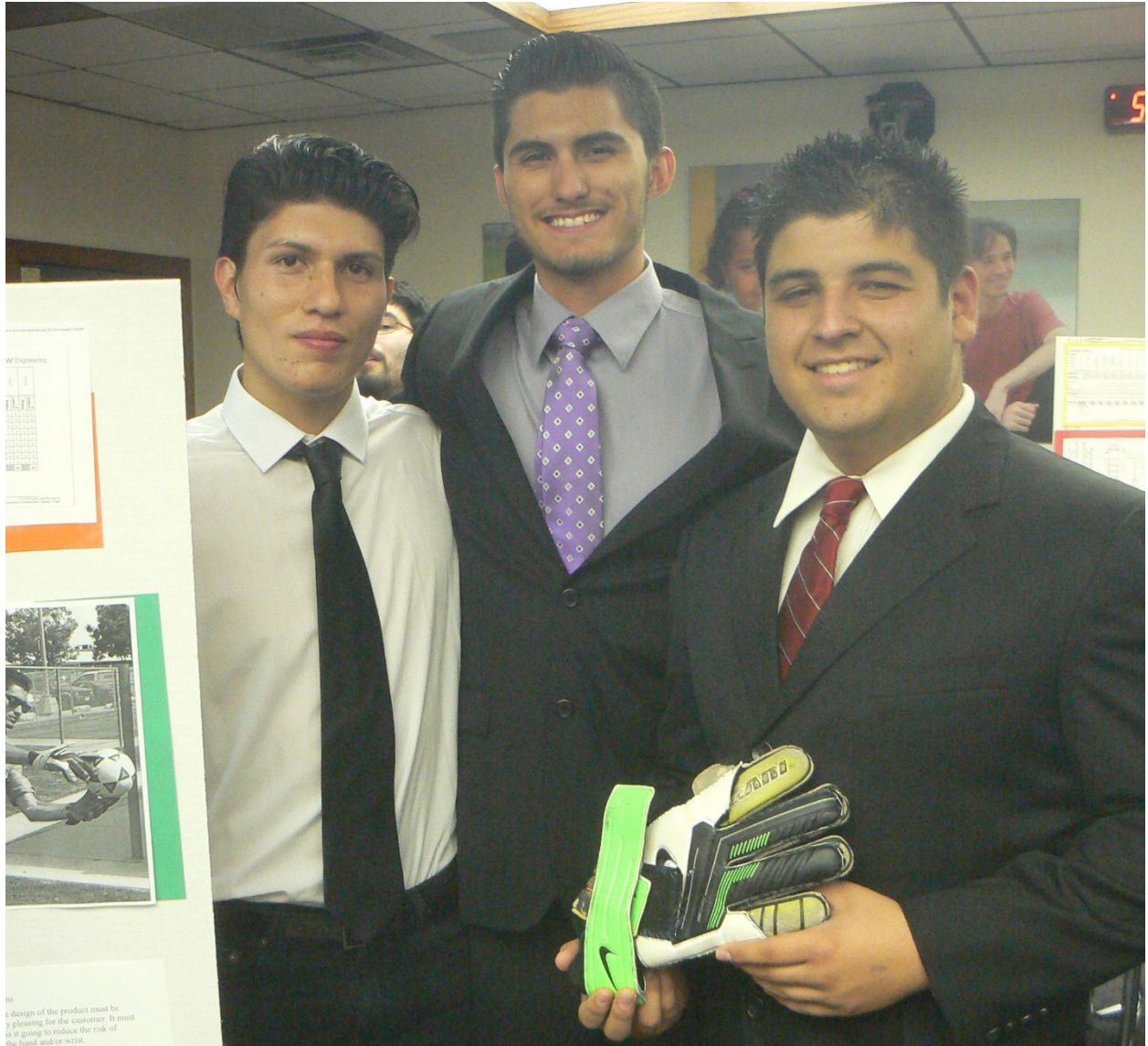
LEAD is a four-year career pathway program. The rigorous, hands-on problem-based curriculum integrates math, science, engineering, and humanities to introduce and prepare students for opportunities available in the field of engineering and design. In the academy students learn:

- 3D and Mechanical Design
- Digital Electronics and Robotics
- Residential and Commercial Building Design
- Project Management
- Teamwork

For information about the program, call the Don Lugo High Counseling Department at (909) 591-3902.



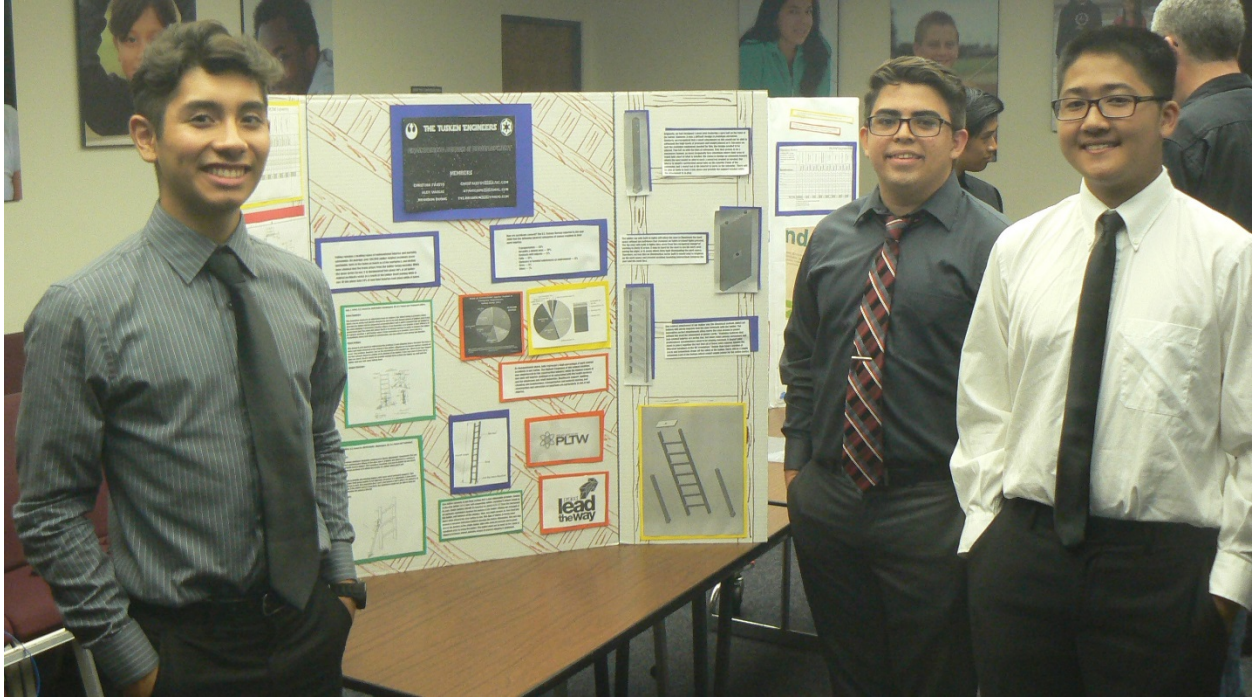
Randy Leyva shows off a prototype for a toilet seat that rises automatically after use.



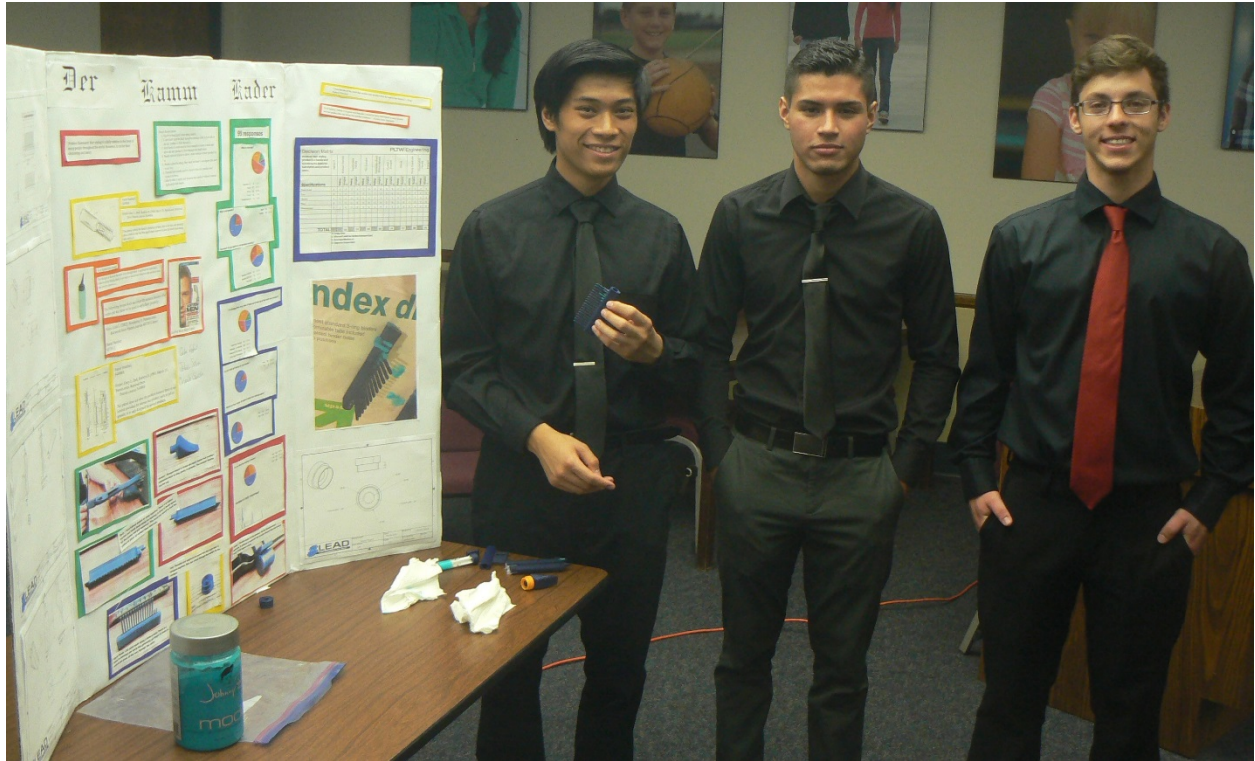
Christopher Gomez (left), Thomas Droog, and Erick Burgos display the improved soccer glove they devised. They call it Grypz.



The Lugo Engineering and Design (LEAD) Academy team of Marc Hernandez (left), Stephanie Segura, and Karina Rizo stand next to their prototype of bookcases that feature a collapsible desk between.



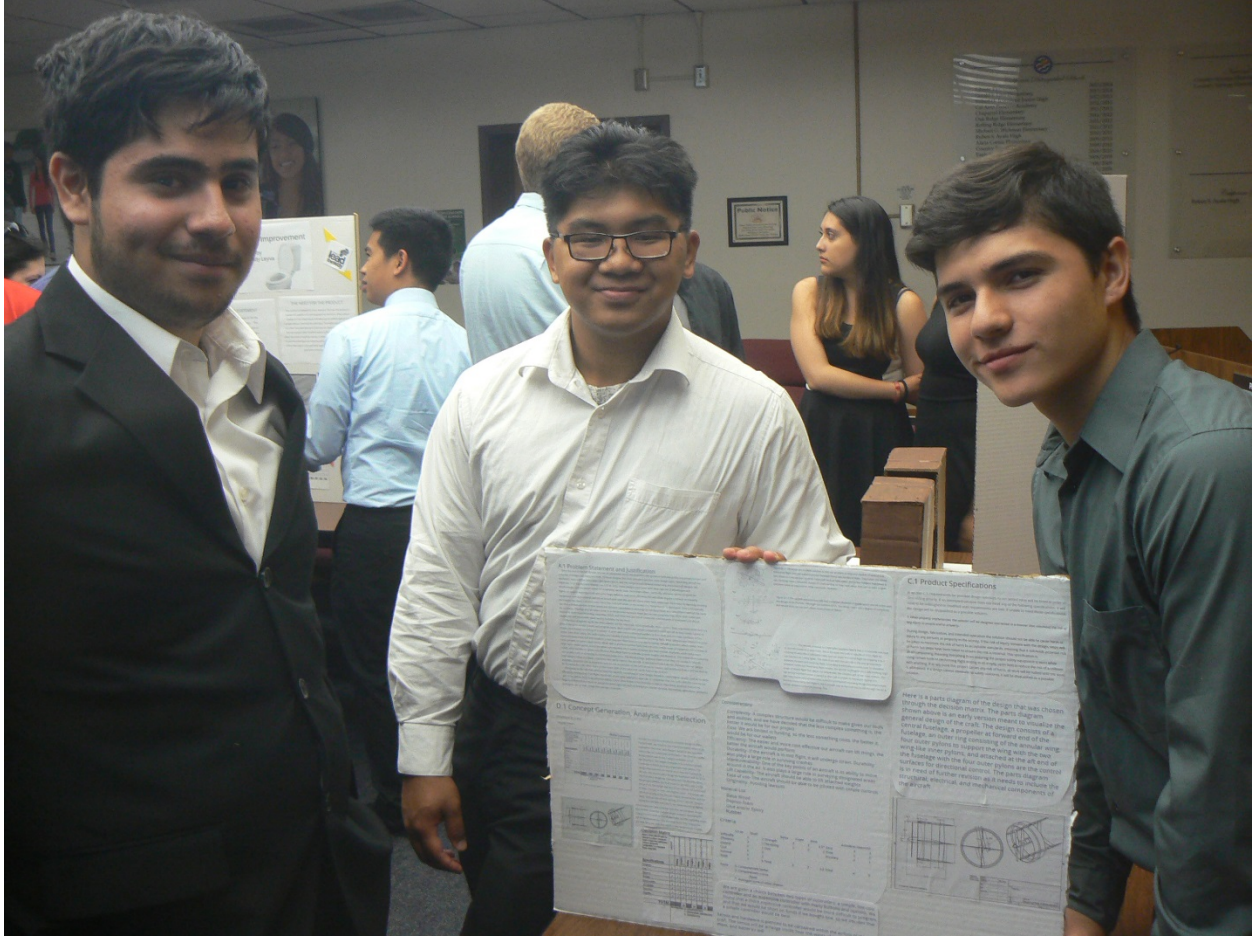
Don Lugo High engineering students Alex Vargas (left), Christian Fausto, and Brandon Duong show off the work it took to design and build a multi-functional ladder that features electrical outlets for power tools and LED lights at the top.



Joshua Silva (left), Orlando Garcia and Costa Gofas devised a “Better Comb” that dispenses hair gel automatically.



A close up of the comb prototype.



Victor Lagos (left), Thomas Nguyen, and Daniel Maravilla show their plans for their unmanned aircraft that can take off quickly.



LEAD team members Christian Scrimmager (left), Ernie Hermosillo (third from left), and Devin Collins show their extreme sports case for cell phones to a guest at the public display of the senior projects.



The Chino Valley Unified School District Board room is filled with people during the LEAD senior project display.