VALLEY CHRISTIAN HIGH SCHOOL ROBOTICS

# EPIC Robotz

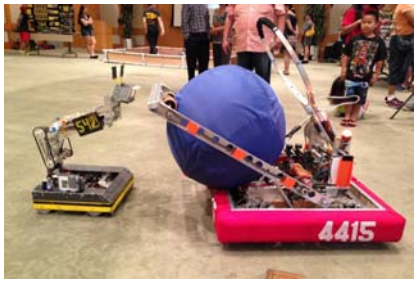
ENGINEERING PROJECTS IN CHRIST

*Valley Christian Schools is nurturing our nation's next generation of Science, Technology, Engineering and Mathematics leaders. Using advanced curriculum and deliberate hands-on project-based learning initiatives such as robotics, CAD, certification, 3D printing, IT server management, web design, computer animation, rocketry, and others, we equip students with demonstrable skills that enable them to succeed in STEM careers. To that end, VCS has established robust competitive robotics programs that serve students from elementary through high school.*

## EPIC ROBOTZ AT CERRITOS LIBRARY

An audience of over 200 people attended tahe first-ever Robotics Demonstration Night at the Cerritos Library, jointly hosted by the EPIC Robotz and Whitney High School robotics team. Our 3D printer and FRC robot were a big hit at this event. The little ones loved to pass the ball back and forth with our robot and several middle-school students and adults were absolutely giddy to see the 3D printer in action.

A group of kids passing the ball back and forth with our robot at the Cerritos Library.



One of Whitney High School's robots meeting Valley Christian's Robot—it was EPIC!

Everyone was excited to see such a diverse and interactive STEM activity. There were many great questions from patrons young and old. Most of them were unaware of how popular robotics competitions have become and how dependent we are on our wonderful team sponsors. Near the end of the evening, two smaller robots belonging to Whitney High School interacted with our larger FRC robot in some games.

*To view pictures and videos of this event please visit our Facebook page at www.facebook.com/vcsrobotics.*

## VCSROBOTICS BUILDS A PI-BOT

A Pi-bot uses an Arduino kit and some special accessories to create a really unique robot. Robots function because they have a compact computer that can sense and interact with the physical world. Arduino is an open-source physical computing platform based on a simple microcontroller board and a programming language. Together they are used to create a Pi-Bot!


Lorenzo Adler with his Pi-Bot.


A special thanks to Melissa & Lavanya Jawaharlal, the founders of the PI-BOT Kickstarter campaign, for attending our Pi-Bot class.

Ten of our students and five of our mentors participated in a 3-week class, taught by Kyle Dominguez, an FRC mentor from Boeing. The project included using an ultrasonic sensor, line following sensor, gear box build, and analog & digital pins. The project is very similar to what college students encounter in the 3rd year of an engineering program.

It was very exciting to see our EPIC teammates succeed in their robot building and programming. New skills were learned by all.

**SHARE EPIC ROBOTZ**

Via email, mail or word of mouth

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*"Created by God to Pursue Excellence!"*

## Why Robotics?

**It's the hardest fun you'll ever have!**

**"Play with the Pros" working with professionals and engineers.**

**Discover your God-given talents, cultivate new skills, and be inspired.**

**Everyone can go PRO in a STEM career.**

We're on the web!
www. EPICRobotz.com

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EPIC Robotz team member Chris Dominik teaches future engineers how to drive the robot at the Annual VCS Harvest Festival.

# GEARING UP FOR A NEW SEASON

The 2015 FRC season is shaping up to be another EPIC year. We held our first pre-season meeting on October 4, 2014. Our team has doubled from 22 to 45 students and our number of female members has increased by 300%. The opportunity to gain STEM skills and to engage in mentorship with professionals and engineers is resonating with students. We are maturing as a team, providing more distinct training in the pre-season, and implementing a new organizational structure.

The ladies of the EPIC Robotz Team.

More control and responsibility is being shifted to the students. Mentors will be looked upon as an expert resource, but not as ultimate decision-makers. At the end of the season, these teammates will be able to look back with pride on what they accomplished. That will be EPIC!

2014 FRC students, families, and supporters at the Long Beach Arena. Our EPIC community is growing fast.

# EPIC ROBOTZ FUTURE GOALS

With strong organic growth, our organization needs help to continue to build and enhance our infrastructure. Properly mentoring over 40 students takes a lot of equipment, from laptops to lab enhancements, to machining tools. Below are some of our near-term goals and future needs:

- CNC Mill & Lathe
- DSLR Camera & Go Pro Camera
- A/V Installation in robotics lab
- Laptops with i5 or i7 processors
- New lighting in robotics lab
- Air conditioning for robotics lab
- New windows for robotics lab
- Video surveillance for robotics lab
- High power animation computer for Houdini software
- Oscilloscope & equipment for an electronics lab
- Jimmy the Robot (an Intel 21st Century Robot program)
- Laser cutter

To find out more about how you can help our EPIC vision please email us at info@vcsrobotics.com.