



Central Valley Robotics

Judging Profile for Team 7517

Team Name: "The Electric L.E.G.O.S."

Project Information

Our project idea is basically an extension to the pipe that carries water to a shower-head, that tells you the water temperature, lets you know when the water is at a certain temperature, and alerts you when you have been in the shower too long. All this helps to save water by having people wait less time for the water to warm up and potentially cutting the time they spend (or waste) in the shower. We built a working prototype using Arduino, 3D printing and various electronics. We improved our design after the qualifier by making the prototype smaller and with a better display. Experts we met with: Sarge Green (Center for Irrigation Technology at Fresno State), Chad Fischer (Tulare District Engineer at State Water Resources Control Board, Division of Drinking Water), and the 59 Days of Code - #FreakingBrilliant series - Panel of water experts: (Martin Querin - Engineering Manager, Cornerstone Structural Engineering Group, Blake Hovespian- Bakan Water Company, Sarge Green-California Water Institute). We shared our solution with the following experts: Mr. Doug Kirk, retired chief of operations at the City of Fresno Water Division; Lisa Koehn at the City of Clovis Department of Utilities; and Sarge Green at the California Water Institute. We also shared our idea with some FLL teams around the world: CPA Robotics in Tennessee by a video conference, and several teams via a shared a Google Document (The Knights that Say Ni an FLL team from Australia, Robo-Warriors an FLL team from Fremont, California, and The Clean Green Team an FLL team from West Chester, Pennsylvania).

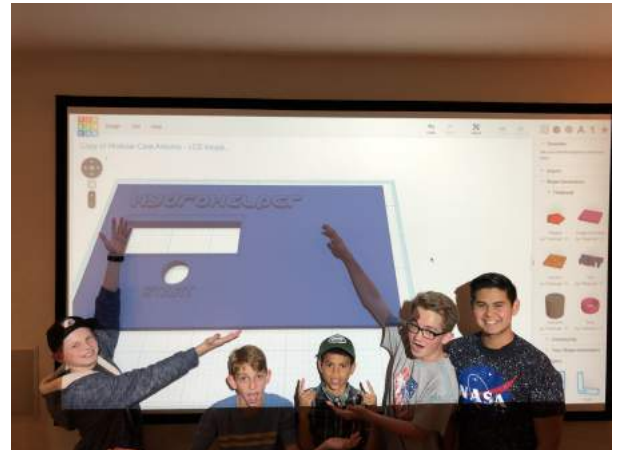
Core Values Information

"We share our experiences with others." We show this core value by helping other teams gain research and ideas. We shared our idea and research with teams in Australia, Tennessee, and Fremont, California. We also acted as ambassadors for FIRST LEGO League at a local FRC competition. One season we also advocated for the FLL program by speaking to over 200 math teachers at a Clovis Unified meeting. "We display Gracious Professionalism® and Coopertition® in everything we do." We displayed this core value by completed the Flow mission in our robot game to potentially give the other team a free 10 points. Another way we do this is letting everyone's opinions be heard before we decide on a solution whether that is robot game or project. We end every practice with a firm handshake to each coach and team member. "We have fun" We do stuff like LEGO SumoBots in the off-season. We also go to movies as a team sometimes. We play video games together, too. There is a lot of laughter at every practice. We consider everything that we do in FLL together is fun. At competition we like to wear crazy things like pizza hats, electric light up Mohawks, light-up stuff, inflatable guitars, and decorate our robot and our cart that we carry our robot with.

Team Roster

Name	Role
Coach Name	Coach
Coach Name	Coach
Student Name	Team Member
Student Name	Team Member
Student Name	Team Member
Student Name	Team Member
Student Name	Team Member

Team Photo



Robot Photo



Fun Facts

We are team 7517, The Electric Legitimate Engineering Geniuses Of Science! We are from Alta Sierra Intermediate. This is our fifth and final season in FIRST LEGO League. From our five years of experience working together we know each other well and work well together. In our team picture we are pointing to the design of our 3D printed case to the first version of our project solution.

Robot Design Information

Robot Name: 5th Attempt

Our robot is a heavily modified version of the base robot from the LEGO Education core kit. We added two ball wheels in the back for better balance, and reconfigured the medium motor in the front to be able to quickly take attachments on and off of it. We also added two color sensors in the front to allow us to square up to lines on the board, and a gyro sensor inside the robot that we use to make sure our robot is traveling in a straight line. Another feature we added to our robot was a large motor at the top and in the back of the robot. Also, we added wheel guards at the sides of the robot and made the back of the robot flat so we can square up to walls. For our mission strategy we decided to group together missions based on their location. For example, on our first run we score lots of missions along the south side of the board (Fountain, Pipe Removal, Faucet, and SlingShot w/Bonus). Also we use strategic objects to help complete missions, such as on our first run we leave a strategic object on Fountain and at the Faucet.