

## Chairman's Award - Team 1671

### Team Number

1671

### Team Name, Corporate/University Sponsors

Harris Manufacturing/Brin Wojcicki Foundation/Valley Iron Inc/Educational Employees Credit Union/ADCO Manufacturing/Pelco by Schneider Electric/Bulldog Village/Buchanan Foundation/Apple&Buchanan High

### Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2016/2017 year and the preceding two to five years

FIRST offers a safe haven for all our members, by forging life-long connections and creating opportunities for their future careers they otherwise wouldn't have discovered. Our team has inspired more than 150 of our past members to further their education and grow as individuals. FIRST enables our members to develop skills applicable to the real world?outside of the classroom?to not only in science and technology, but in leadership, public relations, graphic design, and cooperation.

### Describe the impact of the *FIRST* program on your community with special emphasis on the 2016/2017 year and the preceding two to five years

We blend STEAM culture with the agricultural community of the Central Valley. Our team has seriously impacted the curriculum of our district; we've inspired the creation of the Principles of Engineering and AP Computer Science class at Buchanan High and regular communication with news outlets like the Fresno Bee, KSEE24, ABC30, and the Clovis Chamber of Commerce, makes us a household name in our county. You can see us march the Veteran's Day Parade or in videos for the White House Film Festival.

### Team's innovative or creative method to spread the *FIRST* message

Team 1671 has published the Children's Book Three Little Birds: Reach for the Stars, which we have developed as a unique way to raise awareness about FIRST, our team, and STEM among a younger audience. Our team spreads FIRST values through our presentations at the Career Tech Expo, Elementary School Carnivals, Women's Conference, Mini Maker's Faire, and the Fresno County NXT Camp, among others. We've also created the popular YouTube series, FLL in Five Days, which has garnered over 24,000 views.

### Describe examples of how your team members act as role models and inspire other *FIRST* team members to emulate

We strive to embody core values when encountering all teams. We mentor and assist 5134, RoboWolves; 5817, Uni-Rex; 6305, Stable Circuits; 1422, Neon Knights; and 3303, Metallic Thunder, offering our facilities and any machine parts they may need. We assist teams in Canada and Ecuador and work with A Hopeful Encounter to raise funds for schools in Southeast Asia. We require members to volunteer at local gardens, food drives for the Poverello House, and Duplo drives for the Children's Hospital.

### Describe the team's initiatives to help start or form other FRC teams

Our crown achievement was creating Project CURIE, the Clovis Unified Robotics Initiative for Engineering?a student-led nonprofit that aims to start FRC teams and ensure proper funding, stability, and growth. We believe robotics has to be held to the same standard as a varsity sport. Thanks to a collaboration of local FRC teams, CURIE has raised thousands while garnering wide support from the district. Most importantly, CURIE acts as a model to start other teams in districts around the country.

### Describe the team's initiatives to help start or form other *FIRST* teams (including Jr.FLL, FLL, & FTC)

The proliferation of FIRST programs has always been a priority of Team 1671, but this year marked an exceptional expansion of FLL and FLL Jr. in our community. Our team has mentored or started over 50 FLL teams in the last several years. This year, we established two of the first FLL Jr. teams in the Clovis Unified School District, and the Central Valley Championship saw a 400% growth in FLL Jr. teams. We are now instituting an FLL team at the Camp Humphreys army base in South Korea.

### Describe the team's initiatives on assisting other *FIRST* teams (including Jr.FLL, FLL, FTC, & FRC) with progressing through the *FIRST* program

This year, our team mentored more than ten FLL teams, created an informative "FLL in Five Days" video and kickoff event, and coordinated the FLL Scrimmage, FLL Battle at the Nest, FLL Central Valley Championship competitions with the purpose of supporting the FLL program and promoting progression of students through the FIRST program. Our robot demonstrations and children's book readings at elementary and middle schools increase our team presence and publicize FIRST and its four levels.

**Describe how your team works with other *FIRST* teams to serve as mentors to younger or less experienced *FIRST* teams (includes Jr.FLL, FLL, FTC, & FRC teams)**

Our team lends support to several FRC teams, including Team 5093 from Mexico, Team 5870 from Ontario, and Team 5814 from Ecuador. We provide advice and guidance via skype calls and emails or in person. We welcome teams to our shop for advice and machining; we communicate and share outreach opportunities throughout the year. We've assisted two of the first FLL Jr. teams in our school district by securing permanent funding and teacher advisors. Every year, we provide mentors for local FLL teams.

**Describe your Corporate/University Sponsors**

This year, we were sponsored by Insight Vision Center, J - I.T. Outsource, NVIDIA, Apple, Pelco by Schneider Electric; they've joined our family alongside organizations such as Brin Wojcicki Foundation and NASA, as well as local business sponsors such as Educational Employees Credit Union, Valley Iron, Harris Manufacturing, ADCO, and others. We pride ourself with our diverse array of international organizations and smaller, local businesses who've provided us with monetary or material donations.

**Describe the strength of your partnership with your sponsors with special emphasis on the 2016/2017 year and the preceding two to five years**

We maintain strong relationships with our sponsors by emphasizing direct and frequent communication. We update them with weekly vlogs and emails, invite them to our shop to see our team's progress, to meet members, to participate in group discussion, and to lend our team a helping hand. We invite sponsors to our annual Sponsor Banquet as a fun way to show how much they mean to us. At our Open House, we dedicate our season's robot to mentors who go above and beyond their duty to help us succeed.

**Describe how your team would explain what *FIRST* is to someone who has never heard of it**

"As a freshman, I learned how much the FIRST program impacts its students. When you join FIRST, you open yourself up to a new world where you can make connections and expand your knowledge. You have the chance to design, fabricate, program, and wire robots, raise thousands of dollars, and put on dozens of outreach and volunteer events. I had the privilege to expand my mind and heart to a program that means so much to so many. Now, senior year, I'm ready for the next chapter of my life."

**Briefly describe other matters of interest to the *FIRST* judges, if any**

We model our team as a business, ensuring productivity and real-life experiences. A student leadership of Directors and C-level act as teachers to younger members. Our tenacity, like when our students built a CNC Router, shows that we can sustain our program; we have decades to our name. We never discriminate against anyone who wants to immerse themselves into FIRST and STEAM; we boast diversity. We are a student-led team, and we are proud of what we've accomplished, even our mistakes.

**Team Captain/Student Representative that has double-checked this submission.**

Kaelyn Dauer

**Essay**

Thank you all for coming today. If it pleases the Court, can you direct your attention to Case No. 1671. Here, I've included the diabolical accounts of one of the most infamous FRC teams in FIRST®, and by the time you leave today, you will find this team guilty ? of inspiring a community.

This homegrown FRC Team established itself in 2004. Its infancy was not without challenges. It struggled without the support of veteran FRC teams; yet it persevered. For 13 years, they've been on the run, growing in size and influence. It lives for the FIRST dream: educating, advocating, assisting, and making others excited about science and technology.

Team 1671's mission is to spark interest in the fields of science, technology, engineering, and math to the next generation of leaders, entrepreneurs, and innovators. They strive for teamwork, cooperation, and fun while inspiring young minds to spread their wings.

Heavy recruitment and turning no one who wants to learn away, the team of 14 expanded to 92 - a 671% increase from 2004. Students from every race, religion, gender, disability, and sexual orientation come to and are happily welcomed by the team. Team 1671 offers itself as a safe haven for special education, foreign exchange, and troubled students.

Nothing is more important to the Bird Brains than student-led leadership, as it's the students who continue the program. Structured as a business with both public relations and technical subgroups, our leaders go through an intense interview process as a means to ensure sustainability. The leaders have taken on a rather perplexing role - as teachers. Year-round, the older members work hand-in-hand with new recruits. This role-reversal should daunt the typical happy-go-lucky adolescent, and of course, they have mentors and coaches to guide them. But from the start, this community of young minds strives to look to itself for the answer, even having designed and created a CNC router.

From our reports, we've gathered that these students learn CAD, programming, electronics, and fabrication in addition to graphic design, website administration, public speaking, financial management, and entrepreneurship. 100% of the alumni have graduated and gone on to continued their post-secondary education at various universities or the US Marine Forces Reserves. In 2015, 86% of alumni pursued STEAM fields.

Do you know Michael Adam or Thomas Bayhi? They're Central Valley FIRST Robotics Directors and mentors for Team 1671 and 2761, the former being the 2015 Central Valley Regional Volunteer of the Year. Callie Carbajal? A 2015 Dean's List Winner. Chris Erickson? An animator for Disney Animation Studios. Andrew Nabors, head coach for Team 1671, a network analyst for CUSD and a Controls System Advisor. Eric Licciardello? Alycia Woodbury? Shahe Der Haroutunian? Carter Dana? All affiliates of Team 1671. And all have given back to FIRST.

This team has a spring of resources to pull from; they receive help from a coach, two teachers, and nine other mentors. They play a huge role in developing students into all-around successful young adults. Parents are kept up-to-date with daily Bird Brain happenings at annual Parent Nights and semi-weekly Booster Meetings.

To run a team as large as this one requires money, and our attempts to run them dry have been futile. Team 1671 has feverently gained dozens sponsors who donate money and supplies. They keep in regular contact with their sponsors and show their gratitude by hosting annual Sponsor Banquets, Open Houses, and Dinner Dances. They don't stop there. This year, they've doubled efforts to organize fundraisers with different outlets such as Chipotle, McDonalds, Active Rideshop, and more.

The donated time, money and energy from mentors allow student leaders to train new members, mentor FRC and FLL teams and organize outreach events. The team works with an open shop door policy, all year, inviting educators from the state, FIRST officials, and community members who can tour Team 1671's workplace, the Energy Academy.

The Academy's many visitors include FRC teams that the team has guided. Team 1671 and their alumni assist local FRC teams such as Team 5134 (RoboWolves), Team 5817 (Uni-Rex), Team 6305 (The Stable Circuits), and Team 1422 (Neon Knights). 1671 also crossed borders to help assist teams in Ecuador and Canada. Buchanan Robotics has also partnered up with the non-profit organization, A Hopeful Encounter, that builds schools in Southeast Asia. They're working closely with them to help promote and fundraise a new project to build a school in Laos.

Under our nose, these perps interact with the world by updating their website, Facebook, Twitter, YouTube and Tumblr accounts regularly. We've gathered intel that they've improved inter-team communication with Slack while having a login system that other teams can download from chiefdelphi.com. It sends the team email updates, stores data and sorts team information. Unfortunately, the scope of this team's influence has expanded beyond our control.

## Essay - page 2

Since 2005, Team 1671 has mentored a plethora of FLL teams, reaching thousands of young minds. FLL has grown so much in the Central Valley that in 2011, they created their own FLL qualifier tournament, the Battle at the Nest. Central Valley Robotics used this tournament as the model for a seven-qualifier system. Leaders plan and execute the entire event using Central Valley Robotics resources. Additionally, they host yearly Scrimmages as well as Kickoffs, called FLL in 5 Days. They've established two of the first permanent FLL Jr. teams within the Clovis Unified School District. Dry Creek Elementary now has an FLL Jr. program that receives funding from its school, supports a teacher coordinator, and advertises to the entire school in the fall.

Team 1671 helps at FRC events, too. From co-hosting Madtown Throwdown since 2011, to holding public training sessions, to creating a website and a drivers' dashboard for FRC teams to use during the offseason competitions (allowing those who could not attend to check match scores), the team successfully demonstrates cooperation.

Team 1671 also makes an annual scouting application so team members can scout teams and matches with ease.

Team members who don't scout are volunteers at every competition attended.

The Bird Brains know how influential and powerful the presence of media is in society. People need to know how important this program is to the youth, and Team 1671 promotes the values of FIRST in a variety of interesting and fun ways. Team 1671 wrote a children's book, titled *Three Little Birds: Reach for the Stars*; the book inspires children to follow their dreams and encourages their interest in STEAM activities. Communication with news outlets around the Central Valley has increased dramatically, being regularly broadcasted and published in local news stations and papers. They've even attracted the attention of Clovis's Chamber of Commerce and became members to the organization.

Members stay connected with Buchanan High by making a t-shirt cannon for rallies and sports events, appearing on the school video announcements, organizing tutoring sessions and writing for schoolwide and districtwide newspapers. Our Teacher Advisor, Mr. Paul Lake a Woodie Flowers Finalist and 2014 California Teacher of the Year, has been the cornerstone for this effort. He worked to lobby high school officials to create the first ever Robotics class in CUSD, Principles of Engineering.

The team has expanded their reach by visiting sick kids at Children's Hospital, writing holiday cards for troops overseas in memory of the eight fallen soldiers of Buchanan High, showing off their robots at carnivals, organizing Duplo Drives for the Garfield Special Education Center and the Buchanan Preschool as well as for blood drives and Poverello House Canned Food Drives. They've presented at Fresno Women's Conference, the Fresno Fair, the Young Author's Fair, the Fresno Library Book Sale, the Fresno Career Tech Expo, Sear's National Day of Safety, Fresno's Mini-Maker Fair, the Fresno Mexican Consulate, the Mythbusters: UNLEASHED show, marched at the Fresno Veteran's Day Parade, listened to speeches by aerospace engineer, Adam Seltzner, and volunteered at the Clovis Botanical Gardens and for the Red Cross. Bird Brains also volunteer at Alta Sierra's annual solar car races and act as judges for their science fair. In January 2014, they've submitted a video promoting the use and impact of technology in the classroom to the White House Film Festival in Washington D.C. They've infiltrated our government even more as in, 2013, they lobbied Congress for the reauthorization of the Elementary and Secondary Education Act.

Two years ago, they created Project CURIE, the Clovis Unified Robotics Initiative for Engineering. Project CURIE was sparked two years ago, when they noticed other robotics teams in the district struggling to stay afloat. With constant funding issues, the lack of a place to work, and changing advisors ever year, Project CURIE needed to help teams in the district to function and flourish. Last year, they lobbied Clovis Veteran's Memorial District Board Members and received a \$10,000 grant toward the success of robotics in the Central Valley. With the grant, they hosted the first CURIE Carnival: A Robotics Open House, where they showcased the different robotics teams in the district to members of the community and district officials. Together, CURIE continues to spread STEAM across the valley while raising thousands of dollars. They've created a new voice for robotics in the community and make sure their voice is heard so that no FRC team gets left behind.

Who are they you ask? Well, they are none other than the FRC Team 1671: the Buchanan Bird Brains. After all of the evidence we've presented to you, the only fair conclusion to this case is to find these so called "Bird Brains," guilty, of inspiring young minds to spread their wings.