LANGERIDA

## Published November 11th, 2009 The La-Z-Boy Road to Engineering Submitted by Ann Hoffman



Chris McIntosh on his electric go-kart Photo provided

Who buys an old La-Z-Boy recliner and converts it into a zippy, donutspinning electric go-kart? Answer: a teenager with a knack for mechanical engineering. Chris McIntosh, an 18-year-old senior at The College Preparatory School and Orinda resident, devoted most of his summer to the La-Z-Boy project, now finished at a hefty 150 lbs., geared for 15 mph forward and reverse, and featuring a welded steel frame and car steering. It is making its debut, decked out in the new red upholstery sewn by his family, at College Prep's school spirit rally, on Friday, October 30.

The inspiration for the project grew out of a MIG welding class Chris took over a weekend at The Crucible in Oakland. "I first learned how to weld in a stagecraft class at College Prep, and I knew I wanted to improve my skills for future student engineering projects," explained Chris, citing his plans to apply this fall to a number of college engineering programs. With his savings, Chris found a used welding set to purchase as well as the old La-Z-Boy he had quickly identified as having potential.

Bringing the concept to completion drew on the experiences Chris was fortunate to have as a member of The Athenian Robotics Collective, which is a high school team competing annually in the FIRST Robotics Competition. Chris joined the team in ninth grade because College Prep did not offer robotics and he knew this

experience would be worth the long commute. "Through the ARC robotics team, I have learned to conceptualize, prototype, use machine tools, and work within design guidelines in close collaboration with team members," noted Chris. He believes that robotics deserves credit for spurring his interest in designing his own engineering projects, which have included the motorized La-Z-Boy, a leaf blower-powered personal hovercraft, and an air-powered cannon. Chris keeps in touch with the former mentors of his robotics team, who generously have helped him think through certain aspects of his La-Z-Boy design. "My former mentor, Steve Post of Curtis Instruments, put me in touch with another engineer, Bob White, who could answer my questions about the motor controller I needed to be able to use," stated Chris.

The La-Z-Boy was a several month long learning experience for Chris, which he values as highly as any academic class in preparing him for the study of engineering. Chris gained considerable confidence in his technical design skills and ingenuity. "The field of engineering is a constant process of learning and problem solving. Through my projects I have learned that I truly enjoy this process and the satisfaction it can bring."

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