

JUNIOR HIGH TECH

LEARNING BY DOING HELPS MAKE THE GRADE

BY MICHELLE BROOM



There's a buzz in the room. Not only from the hum of the computers and machinery that fill the building, but the whirr of young minds learning and exploring.

Stirring the brains of nearly 30 seventh- and eighth-grade students are Cal Poly alumni **Richard Anderson (EE '69, IA '83)** and **Tony Poncé (ARCH '75)**, teachers at El Camino Junior High School in Santa Maria.

Make that "extra-special" teachers.



Richard Anderson (EE '69, IA '83) and **Tony Poncé (ARCH '75)** are partners and friends at Santa Maria's El Camino Junior High. They were named 1999 honorees in Disney's American Teacher Awards for their innovative Exploring Technology Lab. (Photos by Marcia Wright)

Anderson and Poncé were named 1999 honorees in Disney's American Teacher Awards — two of only 39 teachers selected from more than 75,000 nominees recognized for using creative teaching strategies in their classrooms. Since 1989, Disney has acknowledged exemplary teachers for innovative teaching methods that actively engage students in learning.

This honor was earned for the unique way Anderson and Poncé team-teach in their Exploring Technology Lab, a career-oriented, self-directed program that gives students hands-on practical training and "the opportunity to challenge themselves in new areas, gaining increased self-confidence through success," says Poncé.

In cubicles, working in pairs of two, students experiment with digital imaging, applied physics, and robotics. They build towers and bridges, and airplanes and rockets that fly. They operate detailed machinery and learn to play digital music on keyboards.

"Years of teaching at the junior high school level, combined with years of being students ourselves, has taught us that young people are excited about learning things relevant to what is going on in the real world," says Poncé. So in their shared vision for a better future for their students, Anderson and Poncé decided to focus on high-tech careers. "The greater the exposure," Poncé says, "the greater the outcome."

In its third year, this innovative, hands-on curriculum serves 850 students annually. During a 12-week session, students spend seven days at one of 28 computer research modules learning about

electrical engineering, architecture, plastics technology, and desktop publishing. They complete assignments and solve problems with creative solutions. "There's never a dull moment around here," says Poncé.

After 12 years in the making, the lab is well organized. The pair has worked tirelessly to raise funding for their project, often purchasing equipment on their own with whatever resources they could find. Finally, in 1996, the school board allocated \$45,000 in partial funding, and Anderson and Poncé raised more than \$100,000 through grants and local business donations to start the pilot program.

Also crucial to the lab's real-world learning are sponsors like Marian Medical Center, which funds the healthy heart module, Santa Maria Rotary Club, which funds the digital imaging module, and Mid-State Bank, which funds the personal finance module.

"THE GREATER THE EXPOSURE, THE GREATER THE OUTCOME."

— TONY PONCÉ

"We showcase this program to members of the community so business professionals can see kids on task," Anderson says. "Most of these students would be first-generation college students. Industry is telling them, 'You can make it.'"

Sitting in a soundproof booth, 13-year-old Norma says she would like to go into audio broadcasting. "I like the program because it gives us an advantage to be something better." Adriana, 13, carves her name into a key chain and says she likes working with her hands and hopes to work with machinery.

"We set expectations for students with messages like, 'Not if you go to college, but *when* you go to college,'" Poncé says. "We set examples."

Both teachers, who gained access to Cal Poly through its



Poncé works with a student at a digital imaging module.

educational opportunity program (EOP) as historically, economically, and/or educationally disadvantaged students, believe the university made a big contribution to their success. "I really feel like Cal Poly gave us a chance," Anderson says. "This is our payback to society."

Note: Cal Poly's EOP celebrated its 30th anniversary in 1998. CP



Anderson helps students launch rockets they have designed and assembled.