

Hands-on science brings student researchers to Yosemite National Park

by Kathy Dimont

YOSEMITE NATIONAL PARK AND THE UNIVERSITY of California signed a memorandum of understanding that promises to fulfill goals of both entities with the creation of the Environmental Science Academy program. The university's new campus in nearby Merced focuses on science and research, and the proximity of the park offers an excellent opportunity for field studies. Additionally, the university serves the growing and culturally diverse population of California's Central Valley. The San Joaquin Valley's population expands by about 100,000 residents per year, dominated by Latinos, Asians (primarily Vietnamese and Hmong), African Americans, and other ethnic groups. The park wants to reach these audiences to help them form meaningful relationships with Yosemite National Park and to foster resource conservation.



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“Behaviors, beliefs, attitudes, and aspirations are changed by allowing students to interact directly with park resources.”

Capitalizing on the combined strength of the university and park systems to reach those goals, the park, University of California–Merced, and the Merced Union High School District work together to immerse high school students in natural resource education. The USDA Forest Service also joined the partnership with the participation of their wilderness education coordinator. Students selected by their science teachers begin park classes in the summer following their freshman year. Park resource management staff and USGS scientists involve the students in projects related to air quality, water quality, geology, fire ecology, plant ecology, wildlife biology, and other studies. Students collect data throughout the watershed of the South Fork of the Merced River and participate in backpacking trips, including a six-day trip into the Clark Range, that allow them to experience the outdoors in a way they never have before. They offer their findings in presentations delivered to their families, park managers, school boards, and alumni groups. The program offers students the opportunity to return to the park each summer for advanced classes. Many of these students plan to enroll in the University of California in natural resource–related majors after completing high school.

The partnership between the university and the park allows low-income students to be the first in their families to attend college. The university pro-

vides mentors, tutors, and financial aid advice, while the park has been able to offer salaried positions in the California Welcome Center in Merced to five students each summer through a grant from the Ford Foundation. There they provide information to travelers, focusing on alternative transportation methods to help ease traffic congestion in Yosemite. Graduates of the program can serve in Ford-sponsored summer internships in the park and will also be eligible for STEP (Student Temporary Employment Program), SCEP (Student Career Experience Program), and other park employment opportunities. The program lays the foundation for a future employee pool for the National Park Service that serves a national goal of cultural diversity in hiring.

The program, begun in 1999, delivered its first graduates in 2002. It is only a beginning, but these students are reaching out exponentially to their peers, families, and communities with a conservation message, proving that the program is working. One young Hmong student tested water samples from the headwaters of the Merced River through the park and national forest, through agricultural land, and into the city of Merced. As a result of his findings, he and his family no longer eat fish caught in or near the city. One young Latina told of watching in horror as a peer threw fast-food containers into the shrubbery, then admitted that she was once guilty of thoughtless littering herself. Behaviors, beliefs, attitudes, and aspirations are changed by allowing students to interact directly with park resources. The science behind the program offers a new view of the world for these students, a place that they've learned to cherish through the Environmental Science Academy. ■

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The Environmental Science Academy combines the strengths of Yosemite National Park and the University of California, exposing high school students from various backgrounds to field-oriented science and conservation and encouraging personal growth. In stark contrast to when they were selected for the program and not planning to attend college, nearly all participants who have completed the program are now enrolled in college; most are majoring in science.

Merced River and El Capitan,
Yosemite National Park, California.

