



Every child a scientist

The Issue

The U.S. faces a significant challenge as young people are not prepared with the necessary science, engineering, and technology knowledge and skills to compete in the 21st century. Only one-third of fourth-graders and 30 percent of eighth-graders score at or above proficient in science, and that percentage drops to 21 percent by grade 12 (The Nation's Report Card, 2009). The gap in science literacy is especially prominent for Hispanic and African American youth. The future of our workforce and our communities depends on a science-literate citizenry.

What has ANR done?

The National Science Education Standards (NSES) state clearly that students learn science best through hands-on and minds-on activities that encourage skills such as observation, inferring and experimenting. 4-H in Sacramento County serves a diverse, mostly lower-income audience with three such science programs:



Young scientists explore soil in the 4-H On the Wild Side.

- 4-H Youth Experiences in Science Project (YES), which engages children ages 5 to 8 in exploration and encourages scientific tasks like observing, comparing and organizing.
- 4-H On the Wild Side, a teen-planned and led environmental education project that brings forth- through sixth-graders to an overnight camp to learn about and appreciate nature.
- 4-H Water Wizards, a 12-session water project for fourth- through sixth-grade students in after school programs, which balances the need for critical information about water with discovery through exploration.

In all three programs, children don't just learn about science, but become scientists themselves, solving problems and building understanding as they ask questions, look for answers and explore their world. Delivered in partnership with after school programs, these programs fill the non-school hours with learning that promotes critical thinking and discovery.

The Payoff

4-H helps close the science gap

In the last three years, almost 2,400 youth participated in Sacramento County's 4-H science literacy projects, 79 percent of whom were non-white. Children show significant gains in knowledge and great enthusiasm for science. The projects provide engaging science experiences for youth, enhance after-school program quality, and build confidence and competency in after-school staff for teaching science.

Contact

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