

# SCIENCE & EDUCATION Impact

Benefits from USDA/Land-Grant Partnership

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## Education for Life

Preparing kids for today's technical world.

*Scientific and technical knowledge is increasing rapidly and teachers from kindergarten through high school can't always stay current. Land-Grant university faculty and students are joining with local school districts to help teachers upgrade their math and science programs and to improve abilities in basic skills. Outreach to elementary and secondary schools includes mentoring, computer and Web support and summer camps or internships. The USDA/Land-Grant university partnership is committed to boosting scientific literacy and preparing students for today's highly technical world.*

### Payoff

- **Teaching teachers.** Thousands of students and hundreds of teachers have participated in **Arkansas'** AgriScience Education Project, established to help K-12 teachers teach science and math. **Georgia's** Outdoor Classroom Symposium has brought 1,000 teachers, parents and administrators together since 1997 to learn about using the environment in their teaching. **Alaska** scientists are involving high school teachers and students in research techniques that support the protection of reindeer populations. To provide an outdoor experience for students from underprivileged schools throughout the state, **California** held a field-training course for high school teachers and 800 kids. The **Cornell** Institute of Biology Teachers helps teachers and students through its summer institutes, academic year programs, outreach personnel and equipment lending library. In 2000, more than 1,000 teachers received intensive workshops and science kits. A similar program is under way at **North Carolina State**. In **Arizona**, 500 teachers who completed science and technology workshops are taking readily adaptable materials back to their classrooms, reaching nearly 50,000 students.
- **Trying on college.** **Illinois** Research Apprentice Program targets high-achieving pre-college students interested in math and science. About 68 percent of the 386 participants later enrolled in food and agricultural or human sciences; more than one-third selected the College of Agriculture, Consumer and Environmental Sciences. Nearly 250 obtained degrees; more than 120 are still in college. A 10-year study of Horizons Unlimited, **Arizona's** residential summer program for high

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school juniors and seniors, showed that of 1,000 students, 50 percent later enrolled in the university; of those, 25 percent attended the College of Agriculture and Life Sciences. Nearly all of the more than 900 graduates of the Pennsylvania Governor's School for the Agricultural Sciences developed at **Penn State** have pursued higher education, and more than 50 percent have pursued academic programs in agriculture and related fields. **Virginia Tech** will open its own Governor's School for Agriculture in 2001. **Nevada's** Early College Program gives advanced students the chance to attend college while still in high school.

- **Classy curriculum.** The 1890 Mobile Environmental Classroom Program brings **Tuskegee** environmental science undergraduate students and faculty together with elementary and high school classes to explore the principles of agricultural and environmental research. As a result, some students later majored in environmental science. **Langston's** aquatic education materials, including a 55-gallon tank of fish, helped nearly 6,000 Oklahoma students in 49 elementary schools increase their knowledge of aquaculture and water quality. **Virginia Tech's** Biotechnology Equipment Loan Program circulates more than 30 kits among public and private high schools and community colleges, providing as much as \$6,000 worth of equipment.
- **Mentoring young minds.** To build work skills in Missouri, **Lincoln University** facilitated participation in the national Groundhog Job Shadow Day where 706 students shadowed mentors in 328 businesses, witnessing first-hand how education translates into a career. **Ohio State's** Big Dogs and Cool Cats after-school program paired high school student mentors with fourth-graders lacking after-school adult supervision. This positive attention helped one child earn her first straight-A report card, and the number of children referred for discipline problems was dramatically reduced. Nearly 400 **Georgia** 4-H'ers tutored kindergarten and preschool children, providing one-on-one reading enhancement activities.
- **Back to the farm.** **Maryland's** Close Encounters with Agriculture program introduced 2,800 children and

teachers from 31 schools to principles in agriculture, nutrition and the environment. Fifty-eight percent of the more than 1,000 teachers who participated in **Arizona** Extension's Summer Agricultural Institute over a 10-year period incorporated agriculture into their curricula. To address the drastic decline in farming on Indian lands, the **Southwest Indian Polytechnic Institute** in New Mexico will help re-invigorate cultural traditions by developing a traditional farm, where various native Southwest crops are planted and evaluated. **Vermont's** summer Vermont Farm Youth Corps encourages career exploration in agriculture by placing youngsters in summer work with farms, agricultural-related businesses and agencies. Ag in the Classroom programs are also under way in **Alabama, Florida, Idaho** and **Texas**, and **North Dakota State, Utah State, Washington State** and other Land-Grant universities.

- **Opening the world with the Web.** Youth and adult volunteers in **Idaho's** Widening Our World Technology Corps offer computer technology education experiences in rural communities statewide through a mobile lab. **South Carolina State** Extension installed a YouthNet Computer Lab at a Charleston high school to provide online mentoring and tutoring in education, community development and life-long learning skills for inner-city residents. **Illinois** Extension's educational Web site, The Great Plant Escape, has received 3 million hits from all over the world.



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