

Youth Community Science Education

The *Youth Community Science Education* series provides youth organizations with research based programs, information and curriculum in the areas of:

- Science
- Technology
- Natural Resource Education
- Environmental Stewardship
- Staff Training

The workshops are highly interactive and seek to link research with practice. The *Youth Community Science Education* series offers:

- Workshops delivered within your community
- Research based information
- Interactive activities and practical tips
- Handouts
- On-going technical assistance

Curriculum presented through the *Youth Community Science Education* series is based on the experiential learning model: Young people participate in fun, engaging activities that promote learning and understanding. These curricula are ideal for the after school setting.

We offer participation on a variety of levels:

Program Sites are cooperative ventures between your facility and the University of California Cooperative Extension's Youth Development Program. By designating your facility as a program site, your staff and clientele will be provided with on-going training, support, resources, evaluation tools and possible grant support in order to sustain your program.

Curriculum Training provides your staff with six to twelve hours of hands-on training to develop the skills necessary to successfully implement a program or curriculum at your site.

Staff In-services are two to six hour professional development experiences that will provide your staff with practical tools and resources to work with the clientele at your facility.

Program Visits are one-time 1 to 3 hour visits to conduct a program with the clientele at your facility.

Sample Programs and Workshops

Science

Kitchen Science for Kids

Age/Grade Level: 5 to 12 years

Curriculum Cost: \$4.75

Kitchen Science for Kids uses child-centered science experiments that allow children to explore the sensory, physical, and chemical properties of food, as well as the nutrient and chemical components of food that the body needs to function.



In-Touch Science: Plants and Engineering

Age/Grade Level: 8 to 11 years

Curriculum Cost: \$12.00

In-Touch Science is a hands-on science program that helps children communicate what they observe and learn in science, builds understanding of the science connection between two fields of study, and helps students recognize those science concepts in daily experiences.

Y.E.S.: Youth Experiences in Science

Age/Grade Level: 5 to 8 years and High School

Curriculum Cost: \$75.00

Discovery science is a great way to develop scientific thinking skills in children while they have fun. The 4-H Youth Experiences in Science curriculum introduces inquiry-based science by using teens as teachers, and provides a wide variety of activities to keep kids thinking. Lessons included are:

- Snail Trails
- Bubble Magic
- Collections
- Kitchen Science
- Wonderful Worms
- Wee-Cyclo-Saur-Us
- CLUE – Children Looking Undercover for Energy



SERIES: Science Education and Resources for Informal Settings

Age/Grade Level: 9 to 11 years and High School

Curriculum Cost: \$75.00

Discovery science is a great way to develop scientific thinking skills in children while they have fun. The 4-H SERIES curriculum introduces inquiry-based science by using teens as teachers, and provides a wide variety of activities to keep kids thinking. Lessons included are:

- Beyond Duck, Cover and Hold – Earthquakes
- Chemicals Are
- From Rivers to Ridges: Watershed Exploration
- It Came From Planted Earth



- Oak Woodland Wildlife Habitat
- Recycle/Reuse
- Sciencing with Snails
- What's Bugging You?



Technology

Computer Mysteries

Age/Grade Level: 7 to 19 years

Curriculum Cost: Varies, see below

This curriculum combines an interactive CD-ROM with web-based activities to teach young people how to interact with computers, use a variety of software, add hardware, and take advantage of information on the Internet. The curriculum has four different guides:

- Level 1: Booting Up: Interacting with Computers (CD-ROM) (\$7.00)
- Level 2: Adding On: Hardware and Software Magic. (\$3.25)
- Level 3: Reaching Beyond: The Advanced User. (\$3.25)
- Helpers Guide. (\$3.25)

Natural Resource Education

Project Learning Tree

Age/Grade Level: K to 12

Curriculum Cost: Free with training

Project Learning Tree is an award-winning, interdisciplinary environmental education program for educators. Project Learning Tree helps students gain awareness and knowledge of the natural and built environment, their place within it, as well as their responsibility for it. Available in English and Spanish, Project Learning Tree is also correlated to the California Department of Education subject-based standards.

Project WILD

Age/Grade Level: K to 12

Curriculum Cost: Free with training

Project WILD is an interdisciplinary, supplementary conservation and environmental education program for educators. The concepts in the project WILD curriculum include; Awareness and Appreciation, Diversity of Wildlife Values, Ecological Principles, Management and Conservation, People, Culture and Wildlife, Trends, Issues and Consequences, and Responsible Human Actions. Available in English and Spanish, Project WILD is also correlated to the California Department of Education subject-based standards.

Project WILD Aquatic

Age/Grade Level: K to 12

Curriculum Cost: Free with training

Like Project WILD, Project WILD Aquatic provides learners with opportunities to engage in hands-on learning experiences that demonstrate the importance of aquatic wildlife and its direct relationship to assessing environmental health.

Available in English and Spanish, Project WILD Aquatic is also correlated to the California Department of Education subject-based standards.

Project WET

Age/Grade level: K to 12

Curriculum Cost: Free with training

The goal of Project WET is to facilitate and promote awareness, appreciation, knowledge, and stewardship of water resources through the development and dissemination of classroom-ready teaching aids and through the establishment Project WET programs. Available in English and Spanish, Project WET is also correlated to the California Department of Education subject-based standards.

Environmental Stewardship

Closing the Loop: Exploring Integrated Waste Management and Resource Conservation

Age/Grade Level: K to 6

Curriculum Cost: Free with training

Closing the Loop is a curriculum that provides students with a broad exposure to fundamental concepts of integrated waste management in a hands-on/minds-on fashion. Available in English and Spanish, Closing the Loop is also correlated to the California Department of Education subject-based standards.

TWIGS—A Gardening and Nutrition Experience

Age/Grade Level: K to 6

Curriculum Cost: \$23.00

The garden is a powerful experiential educational tool that can connect children with science, nutrition, ecological responsibility and community beautification. Participants become acquainted with 30 gardening and nutrition lessons suitable for in the classroom as well as in the garden.

Junior Master Gardener

Age/Grade Level: Grades 3 to 12

Curriculum Cost: Varies, See below

The Junior Master Gardener program is for youth of all ages that uses fun activities to teach horticulture and environmental science concepts. Children can get involved in exploring their world through meaningful activities that encourage leadership development, personal pride and responsibility, and community involvement. Older youth are trained to become mentors for younger children participating in the program. Youth involved in the program develop critical thinking skills, and the ability to identify community concerns and take action to address them through individual group projects. The Junior Master Gardener curriculum is correlated to the California Department of Education subject-based standards.

- Student book in English (\$20.00)
- Student book in Spanish (\$20.00)
- Leader Guide (\$38.00)

Junior Master Gardener: Health and Nutrition from the Garden

Age Grade Level: Grades 3 to 12

Curriculum Cost: \$28.50

Growing fruits and vegetables in a home or community garden also provide an environment where health, nutrition, food safety and wide decision-making skills can be taught. The Junior Master Gardener: Health and Nutrition from the Garden can be used to teach and reinforce these lessons and skills. The Junior Master Gardener: Health and Nutrition from the Garden curriculum is correlated to the California Department of Education subject-based standards.

CASEC: California Aquatic Science Education Consortium

Age/Grade Level: 10 to 15 years

Curriculum Cost: Varies, see below

These hands-on leader's guides provide information and activities to build youth understanding of aquatic science. Available in English and Spanish.

- *Creek Watchers: Exploring the World of Creeks and Streams* - Explores the impact that land use near a creek has on the health of the creek's flora and fauna. (\$5.25)
- *Fresh Water Guardians: Defending our Precious Supply* - Investigates the effects of water pollutants and purification systems. (\$4.00)
- *Plastic Eliminators: Protecting California's Shoreline* - Explores the effects of plastic on animal feeding ranges and habitats, identifying and recycling plastics. (\$5.00)
- *Water Inspectors: Examining H₂O* - Activities include building water testing kits, measuring water density, and testing water hardness. (\$4.00)
- *Wetland Protectors: Guarding our Wild and Watery Lands* - Uses scavenger hunts and outdoor exploration to learn the flora and fauna of wetlands. (\$5.00)

Staff and Adult Training

Ages and Stages of Youth Development

Staff Development

\$15.00 material fee

Look at the developmental needs and characteristics of young people, with an emphasis on developing age appropriate learning opportunities.

Experiential Learning

Staff Development

\$15.00 material fee

The experiential learning model is a five-step approach that engages young people in the learning experience and encompasses the "learn-by-doing" theme.