4-H Science in Urban Communities
Promising Practices for 4-H Science in Urban Communities – 1 of 2

PARTNERSHIPS AND RESOURCE DEVELOPMENT

Project Director - Chad Ripberger
County 4-H Agent, CEDH
Cooperative Extension of Mercer County
TRENTON, NEW JERSEY
VIDEO SEGMENT: PARTNERING WITH AFTERSCHOOL PROVIDERS

Promising Practices for 4-H Science in Urban Communities 1 of 2
PROMISING PRACTICES FOR 4-H SCIENCE IN URBAN COMMUNITIES 1 OF 2

HOW WE DID IT

• 4-H professionals nominated by SPL and science liaisons
• Each self-identified strengths in content areas
• Provided description, promising practices, and challenges in each of top 5 content areas
• Compiled info for each content area
• Conference calls in each content area
• Review
## The Contributors

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SECTION 1: 4-H SCIENCE CORE PRINCIPLES

• 4-H Science Program Design – 4-H Science Checklist
• Inquiry Based Learning Approaches
• Providing Youth Authentic Opportunities to Practice and Share Science Abilities
• Training Others to Deliver Science Programs
SECTION 2: PARTNERSHIPS

• Afterschool Providers
• Summer Program Providers
• City Government & City Parks and Recreation
• Universities & Campus-Based Scientists
• Science Centers & Museums
• State Level Practices to Advance Urban Programming
SECTION 3: STAFFING, RECOGNITION, MARKETING

• Content Rich Volunteers
• AmeriCorps Members
• Teenagers as Teachers
• Recognizing Youth & Showcasing Efforts
• Marketing & Branding 4-H Science in Urban Communities
Website and Publication

- [Website URL](http://urban4hscience.rutgers.edu)
- Available May 31, 2011
Promising Practices Manual

View the Manual

Download the PDF version (1.8 MB)

Eighteen 4-H Youth Development professionals from across the country contributed to the development of this guide of promising practices for 4-H Science in Urban Communities as part of a National 4-H initiative funded by the Noyce Foundation. The guide includes promising practices, case studies, and suggested resources in each of 15 content areas - all with a focus on expanding the quality and quantity of out-of-school science programming.

4-H Science Core Principles and Program Design
- 4-H Science Program Design

Partnerships, Resource Development, Program Growth and Sustainability
- Afterschool Providers

Staffing, Recognition, and Marketing
- Content Rich Volunteers
VIDEO SEGMENTS

• Introduction
• 4-H Science Program Design – 4-H Science Checklist
• Providing Youth Authentic Opportunities to Practice & Share Science Abilities
• Training Others to Deliver Quality Science Programs
• Partnering with Afterschool Providers
• Staffing with Teenagers & Teens as Cross-age Teachers
Promising Practices for 4-H Science in Urban Communities

PARTNERSHIPS AND RESOURCE DEVELOPMENT

Janet Martin
Urban 4-H Specialist
IOWA CITY, IOWA
Cedar Rapids/Iowa City technology corridor
“Out of School” committee
ROMISING PRACTICES FOR 4-H SCIENCE IN URBAN COMMUNITIES

Extension Science Engineering Technology Initiative

4-H Youth Development, ISU Extension

IOWA STATE UNIVERSITY
University Extension
The Facts

• 80% of future careers will demand knowledge of science and technology
• Being interested in science may be more important than being good at science
• Schools alone cannot create future scientists and engineers
PARTNERS

The University of Iowa
College of Engineering
K-12 Outreach Coordinator
PARTNERS

VAST (Van Allen Science Teaching) Center, Grant Wood Area Education Agency, Cedar Rapids
The Iowa Children’s Museum

PROMISING PRACTICES FOR 4-H SCIENCE IN URBAN COMMUNITIES 1 OF 2
Rockwell Collins, leader with FIRST
Jenny Becker, Engineering Experiences
(K-12 Education Outreach)
PARTNERS

GEAR Tech 21
University of Nebraska
4-H Youth Development Program

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4-H on Wheels

Promising Practices for 4-H Science in Urban Communities 1 of 2
PROGRAMS

Engineering is Elementary©

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PROGRAMS

GEAR-Tech 21

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Programs

4-H Afterschool

- 21st Century Learning Centers in Iowa City
- CSI afterschool programs
4-H Earth to Entrée Club with Cargill

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PROMISING PRACTICES FOR 4-H SCIENCE IN URBAN COMMUNITIES 1 OF 2

STAFF DEVELOPMENT

Take Flight with the Iowa Children’s Museum

February 23, 2010 • 6:00-8:00 pm
The Iowa Children’s Museum
in the Coral Ridge Mall

Workshop Includes:
- Free Pass to Museum
- "Hands-on" flight activities for after-school programs
- Investigate the principles of flight
- Explore the flight exhibit at the museum

Registration截止日期: February 15, 2010

IOWA STATE UNIVERSITY University Extension
Johnson County Extension: 319-337-3949
Jenine Lovelace

Promising Practices for 4-H Science in Urban Communities 1 of 2
Promising Practices for 4-H Science in Urban Communities

PARTNERSHIPS AND RESOURCE DEVELOPMENT

Jackie Davis-Manigaulte
Senior Extension Associate
NEW YORK CITY, NEW YORK

Cornell University Cooperative Extension
CURRENT AND FUTURE PROJECTS

PROJECTS
- NYC 4-H Science Day
- Environmental Stewardship
- CAUSE – College Achievement Through Urban Science Exploration
- HLM – Hydroponics Learning Model

UPCOMING
- 4-H Tech Wizards
- Toyota Leadership Event
NATIONAL 4-H SCIENCE DAY

- On October 5th & 15th, 2010 NYC 4-H launched the 3rd Annual 4-H National Youth Science Days to help build America's future science, engineering, & technology workforce.
- The National Science Experiment, 4-H$_2$O, focused on teaching youth about water quality and climate change.

- Held at PS 4 in Brooklyn and Food & Finance High School in Manhattan.
- Students completed science day experiment and hands-on activities including carbon footprint pledge.
- Learned about NYC 4-H and how to make community change regarding environmental preservation.
- Partnership with ACE - “Alliance for Climate Education”
STUDENTS AT PS 4 IN BROOKLYN LEARN ABOUT CARBON EMISSION DURING 4-H ELEMENTARY SCIENCE DAY
STUDENTS LEARN HOW TO REDUCE THEIR CARBON FOOTPRINT AT SCIENCE DAY

PROMISING PRACTICES FOR 4-H SCIENCE IN URBAN COMMUNITIES 1 OF 2
STUDENTS TRACE THEIR “CARBON FOOTPRINT” AND WRITE PLEDGES
STUDENT PLEDGES TO REDUCE CARBON FOOTPRINT
NYC NATIONAL 4-H SCIENCE DAY EVENT

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CLIMATE CHANGE EXPERT & NYC 4-H ALUM VERNARD WILLIAMS

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ENVIRONMENTAL STEWARDSHIP

CUCE-NYC 4-H took part in the MillionTreesNYC project, a citywide, public-private program enacted to plant and care for one million new trees across the five boroughs. NYC 4-H is promoting three components of the project:

**Tree Planting**
4-H joined citywide volunteer plantings in parks and abandoned urban areas, and partners with the NYC Parks Department to supply free trees to community residents and other 4-H clubs.

**Stewardship/Community Beautification**
4-H students became stewards over existing gardens and trees, adopting neglected community green spaces, maintaining tree pits, conducting community clean-ups and plantings, and building raised beds to plant flowers.

**Environmental Education**
4-H Groups learned about urban horticulture, community mapping & environment through 4-H Junior Master Gardener ® curriculum and MillionTreesNYC Educational Resources.
STUDENTS PLANT TREES AS PART OF
NYC 4-H ENVIRONMENTAL STEWARDSHIP
Promising Practices for 4-H Science in Urban Communities 2 of 2
4-H Members Participate in Environmental Stewardship at St. John’s NYC Summer 2010

Promising Practices for 4-H Science in Urban Communities 1 of 2
CAUSE – COLLEGE ACHIEVEMENT THROUGH URBAN SCIENCE EXPLORATION

CAUSE is a College-Community Partnership funded by the Teagle Foundation which seeks to improve the college readiness skills of minority youth from low-income communities, combining environmental studies, research, field study, and community service with intensive college preparatory services.

- Students design individualized research projects on science related topics
- Students were provided hands-on advising and workshops on public presentations and interviewing
- Student attend Cornell Summer Program to participate in rigorous environmental science curriculum
- Culminating symposium held for students to present their projects
CAUSE STUDENTS MEET WITH REPRESENTATIVES OF UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (UNESCO)

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CAUSE STUDENTS EXPLORE HEALTHY FOODS IN THEIR COMMUNITIES

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CAUSE STUDENTS LEARN ABOUT CORNELL SUMMER COLLEGE PROGRAM WITH ABBY ELLER
CAUSE STUDENTS PRESENT RESEARCH TOPICS - DIALOGUE WITH SCIENCE EXPERTS AND EXTENSION STAFF

Promising Practices for 4-H Science in Urban Communities 1 of 2
CAUSE STUDENTS PRESENT AT 4-H PUBLIC PRESENTATIONS EVENT AT NEW YORK LIFE

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CAUSE STUDENTS TOUR COOPER UNION – NYC’S FIRST GREEN BUILDING

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HLM – Hydroponics Learning Model

The Hydroponics Learning Model and the Grow with the Flow projects were developed as vehicles to introduce students to high-tech sustainable agriculture and related disciplines via a hands-on applied science-learning environment.

- Year-long learning process involves developing, constructing and monitoring hydroponics units in classroom laboratories
- Students delve into interdisciplinary subjects such as marketing, economics & social implications of science and technology
- Project includes site visits to large-scale food production facilities (farms, greenhouses etc.)
STUDENTS MAINTAIN HYDROPONIC UNITS AS PART OF GROW WITH THE FLOW
WARNER GIVES YOUTH TOUR OF GREENHOUSE & HYDROPONICS LABS ON TOP OF FOOD AND FINANCE H.S.

PROMISING PRACTICES FOR 4-H SCIENCE IN URBAN COMMUNITIES 1 OF 2
NEW INITIATIVES

• Toyota Leadership Development & Education on Careers in Science
• 4-H Tech Wizards / GPS Training
4-H youth met with Toyota executives to discuss leadership and career development.
4-H YOUTH AT TOYOTA LEADERSHIP RETREAT

PROMISING PRACTICES FOR 4-H SCIENCE IN URBAN COMMUNITIES 1 OF 2
GPS/GIS Training for Mentors of 4-H Tech Wizards Project

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GPS/GIS TRAINING FOR MENTORS OF 4-H TECH WIZARDS PROJECT

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Brought to you by 4-H

Through the generous support of

NOYCE FOUNDATION