Urban Ecosystem Project: Mosquitoes & Me Summer Camp

Purpose

Urban Ecosystem Project: Young Scientists and Ambitious Teachers Improving Health in an Urban Ecosystem

Specific Aim #1 – Enhancing Science Learning of Youth
Achieved through youth participation in Mosquitoes & Me programming

Specific Aim #2 – Enhancing Science Teaching of Elementary Science Educators
Achieved through teacher learning and employing Ambitious Science Teaching (AST) and Diverse Pedagogy Theory (DPT)

Specific Aim #3 – Enhancing Mosquito-Related Community Public Health
Achieved through community residents gaining accurate understanding about controlling mosquito populations to improve public health.

Camp Context

• The students served by this program attend schools served by a university-school partnership called the ISU 4U Promise Program. Through this partnership, students are eligible for tuition awards in support of their future undergraduate studies.

• This two-week summer camp builds on young learners’ innate curiosity about the natural world. With its particular insect focus, Mosquitoes & Me aims to nurture students’ capacity to ask and answer big questions and support this skill as an important part of their college-going journey.

• Mosquitoes & Me participants learn authentic science practices while applying ideas about mosquito ecology to their local environment.

• This unique program uses an ambitious and culturally-responsive approach to science education that emphasizes student-centered intellectual engagement and creative thinking.

Participants

Youth:
• Entering grades 5-8 at King and Moulton Elementary Schools, Des Moines, Iowa
• Race and Ethnicity: 63% Female, 43% Hispanic/Latino, 37% African American

Near-Peer, Youth Mentors:
• Returning youth with 1-2 years previous camp experience
• Entering grades 8-10, 40% of camp participants

Camp Educators:
• Preservice teachers: ISU undergraduates, majoring in Elementary Education enrolled in a special “Teaching and Learning with Insects” course.
• Inservice teachers: Recruited from the partner ISU 4U Promise schools and participating in our Professional Learning Communities.

In 2017, we started a collaboration with Walking Palms Global Health, a non-profit organization in Baita de Canagua, Ecuador and the Mosquitoes & Me curriculum was translated into the “Mosquitos y Yo” youth program. This adapted program is serving elementary-age children at Baita de Canagua School in Baita de Canagua, Ecuador. This program mirrors our goals to teach youth and their families and broader community about mosquito-borne diseases and the role they play in public health, particularly in the aftermath of the 7.8 magnitude earthquake in April 2016 that preceded a marked rise in mosquito-borne diseases.

Kid Quotes

“anyone can be a scientist. A scientist studies a subject; even a little kid can ask about the stars.”

“If you don’t know ask questions you won’t learn. Try to find an answer until you get the correct answer.”

“more open to new things.”

“I thought science was not fun and now I enjoy it.”

External uptake: Mosquitos y Yo

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Mission: “To connect and empower local communities promoting disaster recovery using education, research and medicine.”

The Urban Ecosystem Project is a supporting program of the ISU 4U Promise – a partnership between Iowa State University and Des Moines Public Schools – benefiting the youth and families of King and Moulton Elementary Schools. Learn more at www.ISU4U.org.