

## **Title: Hampden County 4-H Urban Programs**

**Project Leader: Lauren Dubois**

### **Project Overview**

Citizens in Massachusetts are appropriately concerned about preparing youth for the challenges of the 21st century. While this concern is understandably focused on academic achievement, young people also need to develop knowledge, skills, and attitudes for good health, environmental stewardship, creative expression, and community service. Young people are best able to reach their full potential in environments that offer safety, caring adults, and opportunities for authentic experience. Adults, educators and youth workers need ongoing professional development and curriculum resources in well-designed opportunities to share their expertise and passions with youth in ways that will enable them to grow up to become better citizens, workers, neighbors, and parents.

UMass Extension youth development programs are grounded in positive youth development principles. They ensure safe, inclusive environments as well as opportunities for mastery and active participation. Our 1,600 statewide volunteers provide recreational and social activities during out of school time that are fun and educational. Our longstanding clubs and camps are complemented by innovative program that respond to a national 4-H mandate for educational enrichment in science and technology. We target youth within urban communities and from families confronting the challenges of military deployment, helping caring adults to reach diverse youth and cultivate skills that are critical for future success and active citizenship

The Massachusetts Urban 4-H Program in Springfield and Holyoke strives to expand the Science, Technology, Engineering, Art, and Math (STEAM) skills of youth in grades K-9. Through partnerships with a variety of community centers and schools, Massachusetts 4-H provides programming based on national 4-H curricula. This curricula provides a rich and diverse set of research, juried curricula and evaluative methodologies developed by faculty throughout the national system. Project leaders will continue to seek partners in the Springfield and Holyoke communities and at UMASS Amherst to expand the array of educational enrichment and youth development experiences to help prepare youth for success in school while creating these connections amongst the three communities. 100% of the young people we serve are low income, the majority are youth of color, and they are underserved and underrepresented in education compared to their white counterparts in neighboring towns and cities throughout the state.

## **Activity Summary - 2019**

- Summer Scholars 4-H Aerospace and Engineering Workshops (26)
- After School Program Workshops 4-H STEAM (7)
- After School Program Workshops 4-H Scholars (1)
- After School Program Workshops 4-H Youth Ambassadors (3)
- After School Program Workshops 4-H Cooking Club (6)
- After School Program Workshops 4-H Coding (4)

### ***Total Educational contacts***

|  | Youth<br>Contacts | Adult<br>Contacts |
|--|-------------------|-------------------|
| In Person                              | 526               | 8                 |
| Indirect Contacts (Print, Web, etc...) |                   |                   |

## **Narrative Summary and Impact - 2019**

The Massachusetts “4-H STEAM” Program reaches over 350 youth in Springfield and Holyoke. The program enhances the Science, Technology, Engineering, Art, and Math (STEAM) skills of young people in grades K-9. Through partnerships with a seven community centers and schools, Massachusetts 4-H provides programming based on its heralded national 4-H curricula. 100% of the young people we serve come from low-income families, the majority are young people of color, and they are underserved and underrepresented in their educational system compared to their white counterparts in towns and cities throughout the state.

“4-H STEAM” provides hands-on learning opportunities for young people between the ages of 5 and 14 who live in Holyoke and Springfield. Based on the needs expressed by our community partners, we focus on Science, Technology, Engineering, Art, and Math (STEAM). We go into schools and community centers and engage with young people through hands-on activities using our outstanding 4-H curricula. We connect every activity to fields in higher education and STEAM-related careers. The program content is age and grade specific at each location, ensuring uniformity in design, training, evaluation, and desired outcomes.

We are currently running “4-H STEAM” programs at the following nine sites: Sargeant West Community Center in Holyoke, Holyoke Boys & Girls Club in Holyoke, South End Community Center in Springfield, Home City Liberty Hill Townhouses Community Center in Springfield, Bay Area Neighborhood Resident Resource Center, Chestnut Accelerated Middle School Talented and Gifted in Springfield, Chestnut Academy Middle School in Springfield, Make-it-Springfield Makerspace in Springfield, and at the UMass Center at Tower Square in downtown Springfield.

4-H STEAM started in 2011 by the 4-H Youth Development program with the goal of addressing the need to introduce more Springfield middle-school students to important topics related to Science, Technology, Engineering, the Arts, and Mathematics.

Over the last 8 years, our 4-H STEAM program has collaborated with a range of faculty from departments across the UMass Amherst Campus. These include Dr. Paula Sturdevant Rees, Assistant Dean for Diversity, Equity & Inclusion, at the College of Engineering; Emily Kumpel, Assistant Professor, Civil and Environmental Engineering; Michael DiPasquale, Extension Assistant Professor, Department of Landscape Architecture and Regional Planning; Dr. Kirby Deater-Deckard Professor of Psychological and Brain Sciences; and Amanda Kinchla Associate Extension Professor/Food Safety Specialist, Food Science Department.

Our programming content and delivery method have evolved over time to cover the most relevant topics, based on

planning sessions we conduct before each semester with UMass faculty and Springfield school administrators. In this way, we can provide the most relevant courses.

4-H, together with our UMass partners have offered hands-on activities and experiences for 4-H youth from urban areas. These hands-on experiences are held both on and off campus.

The program has several important benefits:

**Career Discovery:** STEM opportunities to create interest in higher education and career pathways for this group of young people.

**A range of learning models:** From project based learning field trips to panel discussions these collaborations continue to make an impact.

**A Variety of STEAM learning topics:** Some of the projects we've worked on include: bridge building, Rube Goldberg machines, testing the quality of our local drinking water, creating models of a park to improve the city, monitoring brain activity using EEG technology, making gummy worms, and extracting iron from cereal.

**Making a meaningful connection to Springfield:** in the fall of 2018, each semester we began hosting groups of 20-30 Chestnut TAG middle-school students on the UMass Campus; 4-H Extension Educators and UMass partners organize these field trips.

Before the students visit campus, the UMass partners visit the middle school in Springfield to meet the 4-H STEAM participants. They talk about what they do on campus and the importance of their STEM work for our world. We choose to add in the Springfield visits to deepen the relationship between the young people and our UMass partners. Once on campus the youth will feel comfortable seeing a familiar face.

## **Collaborating Organizations**

- Chestnut Middle School Talented and Gifted (TAG) – Springfield
- Chestnut Academy - Springfield
- Liberty Hill Townhouse Association - Springfield
- Sargeant West Community Center - Holyoke
- South Canal Community Center - Holyoke
- South End Community Center – Springfield
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