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 addition to 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 also target youth from within low-resource 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 - 2017

- Program staff meetings with collaborators and college student mentors (8)
- After School Program Workshops (228)

Total Educational contacts

<table>
<thead>
<tr>
<th></th>
<th>Youth Contacts</th>
<th>Adult Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Person</td>
<td>186</td>
<td>8</td>
</tr>
<tr>
<td>Indirect Contacts (Print, Web, etc...)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Narrative Summary and Impact

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. 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.

We are currently running 4-H STEAM focused programs at the following sites: Sargeant West Community Center in Holyoke, South Canal Community Center in Holyoke, South End Community Center, in Springfield, and Chestnut Middle School Talented and Gifted (TAG), Chestnut Academy, and Liberty Hill Townhouses Community Center in Springfield.

The 4-H Extension Educator for Urban Programs, Lauren DuBois, holds a B.A. in Sociology with a concentration in Social Work from the University of Massachusetts, Amherst. She works as a program facilitator, a liaison between the 4-H Youth Development organization, the University of Massachusetts and the Holyoke and Springfield communities, and supports the 4-H Program Assistant, Lizmarie Lopez, who delivers the programs directly to the youth.

Ms. Lopez has extensive knowledge of Science, Technology, Engineering, the Arts and Mathematics (STEAM), and experience in teaching young people. She graduated from Smith College with a Bachelor’s degree in Liberal Arts and a concentration in Biological Sciences. She is from the same community that she is serving. Her firsthand knowledge of the community, and the challenges faced by young people in urban settings, provides the program with authenticity and understanding.

Too many of America’s youth are lacking the opportunities that prepare them to lead in life and career. They are missing experiences that contribute to development of the life skills they need, like confidence, independence, resilience and compassion. These include experiences where they have the freedom to learn by doing, grow from failure, express their ideas and use their influence to drive positive outcomes. Too many are not receiving these experiences, in school or out of school. The
expectations of schools are greater than ever, but the resources are stagnant or declining. Schools cannot do it alone. They need us to join forces – to bring experiences that support and enhance what happens in the classrooms.

According to the Massachusetts Department of Elementary and Secondary Education, as of 2016, the Holyoke public school district received a Level 5 classification and the Springfield public school district received a Level 4 classification, representing the lowest performing districts in the state. These levels are based on a four-year trend in absolute achievement, student growth, and improvement trends as measured by MCAS. Students living in households up to 130% of the federal poverty level (FPL) are eligible for free meals. Students living in households between 130% and 185% of FPL are eligible for reduced price meals. 99% percent of the students in the Holyoke Public School district and 94% of the students in Springfield participate in a free or reduced price lunch program.

There is a dire need in the Holyoke and Springfield communities for high-quality in-school and after-school enrichment programming. The Holyoke Public School District is looking to increase not only, "hands-on" science, but also "minds-on" science, focused on experiments and getting students to use their observation, critical-thinking, and problem-solving skills to think/behave more like scientists. Our after school setting offers both the additional time needed and the opportunity to diversify the ways that students experience Science, Technology, Engineering, the Arts, and Mathematics (STEAM) learning.

4-H is the Cooperative Extension System’s dynamic non-formal educational program for youth and is part of the Land Grant university system. 4-H ties the research and educational programming of land grant universities to the needs of young people. 4-H is the largest youth organization in the United States with almost 7 million youth participants.

Young people are led by trained and caring mentors in hands-on projects in a positive environment where they learn by doing. While engaging students in STEAM activities and helping them develop the skills to think more like scientists, educators and mentors strive to broaden their horizons about exciting possibilities for higher education and careers in these fields. 4-H’ers learn by doing with educators providing guidance. Instead of directing, educators ask questions. Instead of giving answers, educators sit in the passenger’s seat while the young person takes the wheel, and share knowledge and encouragement if they make a wrong turn. This is the 4-H approach that is proven to grow life skills.

Impact on youth participating in the Improving 4-H Science program includes: 1) 80% of youth report an increased interest in STEAM subjects; 2) 100% of youth learn new science concepts; 3) 100% of youth demonstrate an increase in STEAM vocabulary; 4) 90% of youth are be able to record scientific data accurately; 5) 90% of youth are able to formulate a question that can be answered through data collection; and 6) 90% of youth are able to analyze the results of a scientific experiment or investigation.

Collaborating Organizations

• Chestnut Middle School TAG Community — Springfield
• Chestnut Academy - Springfield
- Liberty Hill Townhouse Association - Springfield
- Sargeant West Community Center - Holyoke
- South Canal Community Center - Holyoke
- South End Community Center - Springfield