The University of Maine

4-H STEM Ambassadors Program

Jeffrey Hecker
Executive VP for Academic Affairs and Provost

January 29, 2018
Board of Trustees
4-H STEM Ambassadors Final Report

In 2015, the University of Maine Cooperative Extension was awarded $14,000 by the Board of Trustees to expand the University of Maine 4-H STEM Ambassadors Program on a statewide basis. The objective of the project was to develop a series of lesson plans and activities that could be used in 4-H programs and other youth programs to help implement the Next Generation Science Standards. The project was designed to support the Maine Science, Technology, Engineering, and Math (STEM) Education Plan, which aims to ensure that all Maine students are prepared for success in postsecondary education, the workforce, and life.

The project was led by the University of Maine Cooperative Extension 4-H program, with support from the Statewide Extension Science and Technology Program. The project team consisted of Extension faculty and staff, as well as members of the 4-H program.

The project resulted in the development of a series of lesson plans and activities that were tested and evaluated in various 4-H programs across the state. The lesson plans were designed to be flexible and adaptable to different settings and audiences, and they included hands-on activities, discussions, and assessments.

The project also provided opportunities for 4-H leaders and volunteers to develop their own lesson plans and activities, and to share their experiences and insights with other 4-H leaders.

The project was funded by a grant from the Maine Board of Trustees, and it was managed and administered by the University of Maine Cooperative Extension 4-H program.
4-H STEM Ambassadors Program

Involves trained undergraduate/graduate students delivering experiential STEM activities to youth at community host sites.
UMS BOT Investment = $100,000

Salary & Benefits

- 4-H Science Youth Professional*
- 4-H Community Education Assistant*

* Additional support from UMaine Extension will continue these positions

Supplies

Curricula and materials to facilitate hands-on experiential learning

Travel

Support for Ambassadors to travel to host sites

$65,000

$30,000

$ 5,000
# Program Growth

## Growth of the 4-H STEM Ambassador Program

<table>
<thead>
<tr>
<th>Academic Year:</th>
<th>2013-14</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
<th>Fall 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth Impacted</td>
<td>16</td>
<td>1,000</td>
<td>1,220</td>
<td>1,026</td>
<td>400*</td>
</tr>
<tr>
<td>4-H STEM Ambassadors</td>
<td>2</td>
<td>85</td>
<td>121</td>
<td>105</td>
<td>64</td>
</tr>
<tr>
<td>Community Sites</td>
<td>2</td>
<td>28</td>
<td>70</td>
<td>63</td>
<td>30</td>
</tr>
</tbody>
</table>

*estimate
Statewide Reach

- UMS Campus Locations
- 4-H STEM Ambassador Program Host Sites
Who Benefited?

4-H STEM Ambassadors provided an estimated value of $48,800 to the local communities served to date

UMS is reaching over 1,000 youth annually, and providing meaningful experiences for over 100 undergraduate students

One local after-school program leader said,

_The program has really added value to what we are trying to accomplish with these kids. They are able to see someone closer to their own age, doing science and math and making it fun. It has also helped us feel closer to our local university._

“Science is very, very fun and we need more science projects!”

Youth participant
Spring 2016
Many students simply volunteer, but faculty are allowing the 4-H STEM Ambassador Program to be a community service option for some classes.

UMF has incorporated STEM Ambassadors into science teaching methods courses, providing field experiences not traditionally offered during those classes.

UMA students serve as 4-H STEM Ambassadors in courses offered online and from University College Centers, increasing the geographic scope of the program.

At least seven teaching faculty from the College of Science, Health and Technology have embedded the program in their course syllabi as an option for increased community engagement and science teaching experience.

The program is working to expand by partnering with the NSF ESPCoR SEANET program to implement aquaculture education outreach.

Through a collaboration with the UMPI College of Education, 4-H STEM Ambassadors will increase participation in spring 2018 at both the UMPI and UMFK campuses.
Sustainability

4-H Program staff partially funded from

- NSF EPSCoR SEANET
- NSF ITest
- NSF INCLUDES
- National 4-H Google Computer Science Pathway
“Because of the tremendous success of the 4-H STEM Ambassador Program, UMaine Extension is committed to continuing the program and will continue to seek out partnerships and future funding opportunities with other UMS campuses,” … “We are grateful to Chancellor Page and UMS Board of Trustees for their encouragement and support, allowing us to expand to become a true One University program.”

Lisa Phelps, State Program Leader of the Maine 4-H Program