## Logical Model Report

### 2011-2013 NYS 4-H STEM Plan

#### 4-H STEM

**NYS 4-H**

<table>
<thead>
<tr>
<th>Input:</th>
<th>Activities:</th>
<th>Outputs:</th>
<th>Short-Term Outcomes:</th>
<th>Mid-Term Outcomes:</th>
<th>Long-Term Outcomes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-H STEM Specialist ACCESS Data system Adult volunteers BCTR staff and research campus partners CCE Program Development &amp; Accountability system Community partners National resources and curriculum development system STEM PWT Teen leaders</td>
<td>4-H &quot;Science Ready&quot; curricula 4-H Career Explorations Conference Animal Science events Citizen Science activities Civic engagement Community STEM program partnerships Cornell Connections Local and State Fair opportunities National Youth Science Day NYS Volunteer Forum workshops Science Toolkit modules STARR Weekend workshops</td>
<td>4-H youth learn in the context of real-world STEM activities or research 4-H youth learn using inquiry 4-H youth participate in STEM civic engagement project 4-H youth practice life skills in all STEM projects Diverse 4-H youth learn in a variety of community settings In-depth STEM project completion Teens and adults participate in Youth/Adult Partnerships Wide participation in National Youth Science Day</td>
<td>Youth and volunteers increase engagement in STEM; increase interest and improve attitudes toward STEM 5.2d, 5.2e Youth develop increased life skills Youth develop STEM skills and increase STEM content knowledge 5.2d Youth increase awareness of opportunities to contribute to society through STEM and aspirations to do so 5.2d</td>
<td>Youth express interest/demonstrate aspirations toward STEM and other careers 5.2g Youth increase achievement in school 5.2e Youth apply STEM knowledge and skills to contexts outside 4-H 5.2f Youth adopt and use new scientific methods or improved technology 5.2h Youth demonstrate use of life and 21st Century workplace skills Youth raise questions and identify problems to be addressed using STEM Youth increase contributions to solving community issues 5.2i</td>
<td>Increased and more diverse pool of youth pursuing STEM-related education and careers 5.2j Increased and more diverse pool of trained teachers, scientists, engineers, and technicians 5.2k Increased STEM literacy and engagement in democracy applying STEM knowledge and skills among general population Increased innovation addressing social problems using STEM</td>
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**Assumptions:**

4-H STEM Checklist (which includes essential elements of PYD) and national Logic Model are guiding principles

County Educators are motivated to lead STEM program efforts at the local level and contribute to efforts at the regional and state level.

A variety of delivery modes can be effective at achieving outcomes.

Professional and volunteer development opportunities will be provided to increase capacity in the system

STEM career connections are woven into all STEM programs

**Context:**

Primary target population: K-12 youth in a variety of settings (clubs, camps, afterschool programs, schools, community settings). Secondary: volunteers (adult and teen)

Efforts are made to reach diverse populations