1. **Full name of your Program Work Team (PWT):**
   4-H Science, Engineering and Technology Program Work Team

2. **Please list names, affiliations and e-mail addresses of the PWT Co-Chairs: (With an asterisk [*], please indicate the co-chair responsible for finalizing this report.)**
   
   Susan B. Hoskins*
   Senior Extension Associate
   Institute for Resource Information Sciences, Department of Crop and Soil Sciences, Cornell University
   sbh1@cornell.edu

   Kelly Ann Radzik
   4-H Youth Development Educator
   AgriScience, Animal Science, and Space Science
   CCE Columbia County
   kar25@cornell.edu

3. **Please identify your PWT’s activities, accomplishments, and, most importantly, outcomes and impacts over the past year.**

   **Overview**

   For the October 2010 - September 2011 program year, the 4-H SET PWT was engaged in major initiatives in strategic planning, professional development, and mission mandate support at the national, state, association and club/camp/afterschool levels. The PWT sent representatives to the 4-H Science Leadership Academy sponsored by 4-H National Council supporting the updating of the New York SET Plan. The PWT organized professional development programs in citizen science opportunities, non-formal education strengths, and inquiry methods of instruction. The PWT provided material support to local 4-H with the Wired for Wind National Youth Science Day kits and instruction.

   **Organization**

   The 4-H SET PWT is comprised of association and campus partners. University faculty and staff with extension appointments or responsibilities for 4-H SET programming represent college resources. A 4-H educator from each of the seven 4-H districts in the state provides broad geographic representation. Additional members from associations are actively involved in SET-related programs in their associations and districts. The 4-H State Office members include the Director, SET Specialist and state specialists in SET programming such as Shooting Sports, Energy and Geospatial Science.
The PWT meets at least three times per year. One meeting is dedicated to a 2 day retreat where members travel to convene in person for extended strategic plan development and action. Other meetings are conducted as half day web and conference call meetings. All meetings include both strategic planning and administrative business, and professional development components.

**SET Plan of Action**

A multi-year endeavor to update and implement the New York State 4-H SET Plan of Action began with a New York delegation consisting of PWT members and the New York 4-H Foundation Director attending the 4-H Science Leadership Academy held at the National 4-H Youth Conference Center in December 2010. Each delegate was responsible for one of four plan areas: Curriculum, Professional Development, Evaluation and Fundraising. During the first academy, the delegation drafted a SET Plan and published it to the national website: [http://sites.google.com/site/4hsetonline/set-state-plans-of-action](http://sites.google.com/site/4hsetonline/set-state-plans-of-action).

To begin dissemination of the plan to New York 4-H personnel, the PWT secured a $1,500 implementation grant from the National 4-H Council. The funds were used to initiate a robotics curriculum statewide. The plan was presented at a PWT-sponsored webinar. SET Plan development and statewide science capacity building continues as PWT members and their constituents participate in Science Academy activities including regularly scheduled national webinars and regional trainings.

**SET Plan Components**

The SET Plan developed in 2008 and refined and expanded in 2011 focuses on three initiatives: Science Toolkit, 4-H Connect Kids to Cornell, and Get SET 4-H NY. Each of these initiatives engages a wide range of stakeholders, consists of many activities, and results in local and statewide impacts. The Science Toolkit project was completed this year with final editing and web publication of curriculum units in nine science subject areas.

In the 2010-11 program year, the PWT sponsored multiple events to support “4-H Connects Kids to Cornell” including professional development for PWT members to share with their respective districts and departments. Most notably, the PWT sponsored the “Citizen Science Symposium”, a campus event to showcase and promote opportunities for youth to connect to existing citizen science research and outreach programs. Landmark programs at the Cornell Lab of Ornithology and nine other projects were represented by extension and research faculty and staff.

The “Get SET 4-H NY” evolved into a search for collaborators in community youth-oriented organizations including museums, science centers and libraries. 4-H SET focused faculty established partnerships with the New York Public Library. Based on the initial sharing of Science Toolkit resources with the Summer Reading Program, the groundwork was laid for a PWT-sponsored proposal for a three year formal collaboration with NYSL Summer Reading Program.

**4-H SET PWT In-service Professional Development and Outreach**

PWT Events:

- Dr. Bruce Lewenstein, Dept. of Communications, “Learning Science in Informal Environments”, Nov 2011
- 4-H SET PWT Citizen Science Symposium, May 2011

Karen Purcell, CU Lab of Ornithology. Citizen Science Programs conducted by the CU Lab of Ornithology.

Gary Goff, Dept. Natural Resources. Wasp Watchers

Lori Bushway, Dept. Horticulture. Vegetable Varieties for Gardeners

Mark Whitmore, Dept. Natural Resources. USDA APHIS Beetle Busters

Carlyn Buckler, Museum of the Earth. Mastodon Matrix

Kathy Vreeland, Dept. Earth & Atmospheric Sciences. Community Collaborative Rain, Hail, & Snow Network

Jennifer Dean, NY Natural Heritage Program. iMapInvasives

- Poster presentations
  - 4-H SET PWT hosted Cornell K-12 STEM Coordinators, May 2011

PWT Supported Events:
- Capital Days, Albany, NY, 4-H SET focus, Mar 2011
- Cornell Cooperative Extension Program Council Annual Meeting, Cornell University, Ithaca, NY 4-H SET PWT poster and participation, Mar 2011
- National Youth Science Day preparation, Aug 2011
- 4-H Volunteer Forum, Ithaca, NY, Nov 2011

**Budget**

A PWT Special Needs Funds request was submitted to purchase National Youth Science Day Kits, “Wired for Wind.” The wind energy focus aligned with the new SET priority of Energy. The $1000 grant supported the purchase of 42 kits (each kit included materials for 10 youth) for statewide distribution allowed and encouraged each county to participate in National Youth Science Day activities. To further enable hands-on, inquiry science activities, the kits were demonstrated and distributed to counties at the Youth Building throughout the duration of the State Fair. Youth and adult leaders were trained to lead participate in National Youth Science Day in their clubs.