# 4-H Science, Engineering and Computer Technology (SET) Analyses 4-H Study of Positive Youth Development Wave 6 Data Collection – 2008

The 4-H Study of Positive Youth Development is a longitudinal study that is examining growth and development of young people and the factors that contribute to positive development. Lead by researchers at Tufts University working in cooperation with land-grant universities across the nation, the study began with a 5<sup>th</sup> grade cohort in Wave 1 and will continue through 12<sup>th</sup> grade. Currently, 4,793 young people in 34 states have been surveyed. Longitudinal and cross-sectional analyses are providing important insights into developmental processes and the factors that promote positive youth development. The sample includes 4-H participants and non-4-H participants.

For Wave 6 (2008) data collection, questions regarding science, engineering and computer technology (SET) interests and attitudes were added. These items included:

Participation: I participate in science, engineering and computer technology programs:					
Never	Rarely	Sometimes	Often		
<b>Performance:</b> I do well in subjects related to science, engineering and/or computer technology:					
Never	Rarely	Sometimes	Often	Not Sure	
<b>Plans – Courses:</b> I plan to take science, engineering, and/or computer technology courses after I finish high school:					
Never	Rarely	Sometimes	Often	Not Sure	
Plans – Careers: I plan to pursue a career in science, engineering, and/or computer technology:					
Never	Rarely	Sometimes	Often	Not Sure	

Using data for youth who were in the Wave 6 10<sup>th</sup> grade cohort (n=2359), comparison analyses (t-tests) were conducted to assess differences in self-reports of participation, performance, and plans for future (taking courses and pursuing careers) in science, engineering, and/or computer technology programs. Two groups were created: adolescents who participate in 4-H programs (camps, clubs, after-school programs) and adolescents who do not participate in 4-H programs. The groups were matched on gender, race, urban-suburban-rural, parents questionnaire data, family income per capita, maternal education, and U.S. region. In almost all cases, 4-H participants were more positive about the SET items. Because females are historically under-represented in the sciences, engineering, and/or computer technology, additional analyses were conducted sorted by gender groups.

## 4-H Participants vs. Non-4-H Participants

In Wave 6, the sample included 1309 4-H participants and 788 Non-4-H participants. After matching criteria and missing data are accounted for, the comparison analyses include 650 to 690 participants in each group. On all items, a higher mean score indicates a more positive attitude.









## 4-H Female Participants vs. Non-4-H Female Participants

In Wave 6, the sample included 1491 females and 855 males. Of the 1491 female participants, there are 884 adolescents who participate in 4-H programs, and 466 adolescents who do not participate in 4-H programs. After matching criteria and missing data are accounted for, the comparison analyses include 380 to 420 participants in each group. On all items, a higher mean score indicates a more positive attitude.









## 4-H Male Participants vs. Non-4-H Male Participants

In Wave 6, the sample included 1491 females and 855 males. Of the 855 male participants, there are 424 adolescents who participate in 4-H programs, and 322 adolescents who do not participate in 4-H programs. After matching criteria and missing data are accounted for, the comparison analyses include 250 to 270 participants in each group. On all items, a higher mean score indicates a more positive attitude.









#### 4-H Participants – Males vs. Females

In Wave 6, the sample included 424 4-H male participants 884 4-H female participants. After matching criteria and missing data are accounted for, the current analyses include 401 to 409 participants in the male group and 843 to 862 participants in the female group. On all items, a higher mean score indicates a more positive attitude.







