

**V(A). Planned Program (Summary)**

**Program # 1**

**1. Name of the Planned Program**

4-H Positive Youth Development

Reporting on this Program

**V(B). Program Knowledge Area(s)**

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	20%	20%	0%	
806	Youth Development	80%	80%	0%	
	<b>Total</b>	100%	100%	0%	

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	138.0	13.0	0.0	0.0
Actual Paid Professional	135.0	17.0	0.0	0.0
Actual Volunteer	46.0	6.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
2950973	840552	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
10407475	840552	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
100000	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

- **Clubs/Project Groups** - At least 65 Tennessee counties organized over 2,500 4-H clubs where workforce preparation was the major emphasis in FY 2012. Project work was emphasized, and the experiential learning model was used to highlight jobs and careers aligned with 4-H projects. Activity sheets were developed to emphasize practical skills aligned with jobs and careers.
- **School Enrichment** - Various school enrichment programs in at least 50 Tennessee counties focused on science, engineering and technology. Youth were exposed to jobs and careers associated with science fields.
- **Mass media** - Mass media was used to inform parents, participants and stakeholders about program opportunities and achievements.
- **Youth from Under-Served and Limited Resource Families:** In FY 2012, UT and TSU Extension 4-H Youth Development programs placed special emphasis on 4-H Science programs in clubs, afterschool settings and other venues to reach youth. The ultimate goal was to increase science literacy among the state's young people. TSU Extension devoted resources to reach underserved and limited resource youth.

**2. Brief description of the target audience**

Tennessee youth in grades 4-12 will be targeted for this program. To encourage participation of underserved and minority youth, the majority of programs were organized and taught in public schools.

**3. How was eXtension used?**

Tennessee is represented by 108 eXtension members in 42 of the 59 approved Communities of Practice (CoP). Tennessee Extension personnel have addressed over 800 Frequently Asked Questions through eXtension.

This Positive Youth Development Planned Program was enhanced through the service of seven Tennessee Extension personnel on the "For Youth, For Life" and "Military Families" CoP. Tennessee Extension personnel shared implementation strategies, outcome measurement, and evaluation protocols with their CoP colleagues.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	280963	845671	1299903	0

**2. Number of Patent Applications Submitted (Standard Research Output)**

**Patent Applications Submitted**

Year: 2012  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

<b>2012</b>	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Actual</b>	4	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of volunteers utilized in delivering this program.

<b>Year</b>	<b>Actual</b>
2012	8295

**Output #2**

**Output Measure**

- Number of exhibits produced.

<b>Year</b>	<b>Actual</b>
2012	413

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Achieving Goals: Number of youth who now put their goal in writing.
2	Achieving Goals: Number of youth who now report they set high goals.
3	Achieving Goals: Number of high school youth who have set a goal for their job or career.
4	Communicating: Number of youth who can express ideas with a poster, exhibit, or other display.
5	Communicating: Number of youth who can use technology to help themselves express ideas.
6	Communicating: Number of youth who have learned at least five jobs in which communication skills are important.
7	Communicating (Public Speaking): Number of youth who can deal with their nervousness when giving a speech or talk.
8	Communicating (Public Speaking): Number of youth who can select a topic for a speech or talk.
9	Communicating (Public Speaking): Number of youth who can speak loudly enough to be heard when giving a speech or talk.
10	Communicating (Public Speaking): Number of youth who feel comfortable sharing their thoughts and feelings in a speech or talk.
11	SET: Number of youth who can design a scientific procedure to answer a question.
12	Building Science Literacy
13	Improving STEM Skills of Tennessee Youth
14	ASPIRE: Developing 4-H Leaders in Limited Resource Communities across Tennessee

**Outcome #1**

**1. Outcome Measures**

Achieving Goals: Number of youth who now put their goal in writing.

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	10874

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #2**

**1. Outcome Measures**

Achieving Goals: Number of youth who now report they set high goals.

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	7193

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #3**

**1. Outcome Measures**

Achieving Goals: Number of high school youth who have set a goal for their job or career.

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	8741

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #4**

**1. Outcome Measures**

Communicating: Number of youth who can express ideas with a poster, exhibit, or other display.

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	23084

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

## **Outcome #5**

### **1. Outcome Measures**

Communicating: Number of youth who can use technology to help themselves express ideas.

### **2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	15148

### **3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

## **Outcome #6**

### **1. Outcome Measures**

Communicating: Number of youth who have learned at least five jobs in which communication skills are important.

### **2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	15345

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #7**

**1. Outcome Measures**

Communicating (Public Speaking): Number of youth who can deal with their nervousness when giving a speech or talk.

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	38368

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #8**

**1. Outcome Measures**

Communicating (Public Speaking): Number of youth who can select a topic for a speech or talk.

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	46597

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

## **Outcome #9**

### **1. Outcome Measures**

Communicating (Public Speaking): Number of youth who can speak loudly enough to be heard when giving a speech or talk.

### **2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	38149

### **3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

## **Outcome #10**

### **1. Outcome Measures**

Communicating (Public Speaking): Number of youth who feel comfortable sharing their thoughts and feelings in a speech or talk.

### **2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	30758

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #11**

**1. Outcome Measures**

SET: Number of youth who can design a scientific procedure to answer a question.

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	11173

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

**Outcome #12**

**1. Outcome Measures**

Building Science Literacy

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The National Science Foundation's (NSF) Science and Engineering Indicators concluded that most Tennessee 4th and 8th graders do not demonstrate proficiency in the knowledge and skills taught at their grade level in science and mathematics.

**What has been done**

UT and TSU Extension made 109,277 direct educational contacts to help youth gain new knowledge, acquire new skills and increase aspirations regarding science, engineering, and technology. Programs were delivered through 3,375 group meetings including organized clubs, camps, project groups and school enrichment by Extension 4-H Agents and volunteers.

## Results

1,117 youth were involved in evaluated programs that focused on long-term skills related to science, engineering, and technology. Completed questionnaires were obtained from 233 youth (21% of total participants). The following outcome indicator data was obtained:

\*77% report they can communicate a scientific procedure to others.

\*89% report they can create a display to communicate scientific data and observations.

\*91% report they can use data to create a graph for presentation to others.

\*84% report they can use models to explain scientific results.

\*69% report they can use science terms to share scientific results.

\*87% report they can use the results of their investigation to answer the question they had asked.

## 4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

## Outcome #13

### 1. Outcome Measures

Improving STEM Skills of Tennessee Youth

### 2. Associated Institution Types

- 1862 Extension

### 3a. Outcome Type:

Change in Knowledge Outcome Measure

### 3b. Quantitative Outcome

Year	Actual
2012	0

### 3c. Qualitative Outcome or Impact Statement

#### **Issue (Who cares and Why)**

Science, technology, engineering and mathematics (STEM) education is a priority at local, state and national levels. Tennessee has historically performed at or below the national average in science and mathematics. One of the key initiatives of the recent Race to the Top education reform program adopted in the State of Tennessee is increasing STEM education in grades K-12.

#### **What has been done**

Specialists in the Biosystems Engineering and Soil Science department utilized a variety of educational efforts to promote STEM education in Tennessee. These efforts included partnering

with Tennessee's electric power distributors and TVA to hold the 2012 4-H Electric Camp; partnering with Tennessee Geographic Information Council (TNGIC) to host 3 workshops teaching GPS and GIS to 4-H agents, volunteers and youth; coordinating a National 4-H Youth Science Day event; and presentations at various summer camps and Earth Science Day events. Educational resources and materials including 1 peer reviewed journal article, 7 curriculum modules and several factsheets were developed to support these educational programs.

**Results**

\*105 middle school females increased their knowledge and skills in soil science and molecular biology as a result of attending Gadget Girls and SHADES (Sharing Adventures in Science & Engineering) programs.

\*91 middle school youth increased their knowledge and skills in soil chemistry and biology by attending Garden and Forensics Camps.

\*48 youth increased their knowledge and skills of GPS navigation, geospatial data collection and GIS mapping by attending workshops at TNGIC regional conferences.

\*307 6th and 7th grade 4-H members increased their knowledge of energy, electricity, energy conservation, electrical safety and other basic sciences in fun-filled, hands-on" learning activities by attending 4-H Electric Camp.

\*900 elementary school youth increased their knowledge of electricity, chemistry, energy and other basic sciences as a result of attending in-school STEM education programs.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

**Outcome #14**

**1. Outcome Measures**

ASPIRE: Developing 4-H Leaders in Limited Resource Communities across Tennessee

**2. Associated Institution Types**

- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	0

**3c. Qualitative Outcome or Impact Statement**

### **Issue (Who cares and Why)**

Effective community leadership is critical for the developing and sustaining healthy communities. It helps develop important networks, establish communication and provides community direction. Researchers have found evidence that leadership programs can financially benefit communities beyond the participants who formally participate in the leadership training program. A recent study found that for every \$1 invested in a community leadership program, there is a net return of almost \$3 to the same community.

### **What has been done**

Agents in 20 counties in reported 33,292 contacts through school clubs, after-school care programs, workshops and summer day camps. Instruction focused on leadership, healthy self-esteem, positive risk-taking, achieving goals, ethical decision making, public speaking and responsible citizenship. Extension made 80,404 contacts to lead, train, recruit and coordinate 4-H volunteers.

### **Results**

TSU Extension surveyed various groups of youth to determine the impact of the different aspects of the ASPIRE Youth Leadership program. Some of the highlights include:

\*105 4-H clubs were led by volunteers.

\*90% of youth reported that they learned more about leadership.

\*2,538 students were able to select a topic and speak loudly enough to give a speech.

\*181 youth reported that they know how to set goals and they use that ability when leading a group.

\*182 youth reported that they can now cooperate and work in a group.

\*1464 youth reported that they could explain their ideas to others.

## **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

### **V(H). Planned Program (External Factors)**

#### **External factors which affected outcomes**

- Appropriations changes
- Competing Public priorities

#### **Brief Explanation**

In FY 2012, state appropriations in Tennessee were reduced across the board for all public agencies. For UT Extension, this was a \$2.5 million reduction from FY 2011 to FY 2012 in operating expenditures. Both UT and TSU Extension made programmatic changes to accommodate reductions. These changes included limiting postage, travel and printing.

### **V(I). Planned Program (Evaluation Studies)**

## Evaluation Results

### Tennessee 4-H Youth Development Leadership Skills

Youth Development and Leadership are important components of workforce development programs according to research from the National Collaborative on Workforce and Disability. In 2012, 108,467 Tennessee youth and adults were involved in 4-H leadership programs. Of those persons, 11.8% were of a minority population.

- Specifically, 59,681 contacts were made through meetings and demonstrations.
- Direct and e-mail, as well as personal telephone calls, also indicates that 20,555 persons were contacted directly.
- On-site visits to the farm, home or workplace and client office visits (9,538) also indicated that our programs are directly reaching youth.

In 2012, 57 Tennessee counties reported program activities in leadership. Completed survey questionnaires focused on short-term skill development in the area of leadership were obtained from 1,165 of the 3,866 participants (30.1%) in this program area. The following beginning outcome indicator data were obtained.

Because of their 4-H experiences:

- 75% (876) reported that as a member of a committee, they take their job seriously.
- 87% (1,016) reported that they help to ensure that everyone gets an opportunity to say what they think.
- 92% (1,075) believed that they could cooperate and work in a group.
- 89% (1,042) believed that when in charge of a group, they treat everyone fairly and equally.
- 82% (953) indicated that they know how to set goals and use them when leading a group.

Completed survey questionnaires focused on intermediate skill development in the area of leadership were obtained from 903 of the 2,296 participants (39.3%) in this program area. The following intermediate outcome indicator data were obtained.

Because of their 4-H experiences:

- 93% (840) noted that they like to work with others and help them reach their goals.
- 79% (712) reported using enthusiasm to get a group working.
- 89% (783) indicated that they felt comfortable being a group leader.
- 82% (741) reported that they could run a meeting.
- 81% (731) said that they give clear directions.

Completed survey questionnaires focused on long-term skill development in the area of leadership were obtained from 424 of the 2,196 participants (19.3%) in this program area. The following long-term leadership outcome indicator data were obtained.

Because of their 4-H experiences:

- 80% (338) reported that they seek out other people who can help them become a better leader.
- 61% (259) said that they are able to break tough problems down into smaller, simpler task.

- 53% (223) indicated that they felt comfortable being responsible for a group.
- 72% (304) indicated that they were sensitive to the feelings of others when discussing and solving problems.
- 81% (342) reported that they are able to resolve problems without losing control of their emotions.

### **Key Items of Evaluation**

Completed survey questionnaires focused on long-term skill development in the area of leadership were obtained from 424 of the 2,196 participants (19.3%) in this program area. The following long-term leadership outcome indicator data were obtained.

Because of their 4-H experiences:

- 80% (338) reported that they seek out other people who can help them become a better leader.
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- 81% (342) reported that they are able to resolve problems without losing control of their emotions.