

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Youth Leadership, Science, and Technology Education

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
806	Youth Development		100%		
	Total		100%		

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	6.0	0.0	0.0
Actual Paid	0.0	5.0	0.0	0.0
Actual Volunteer	0.0	30.0	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
0	419553	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	248965	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Leadership Workshops

- Citizenship Education Tours
- 4-H Clubs
- After-school Tech Academies (GIS, Social Media Education, Entrepreneurship, etc.)
- Youth Gardens
- Youth Cattle and Goat Shows
- Group discussions
- Summer Camps

2. Brief description of the target audience

- Pre-K Students, Teachers and Parents
- Mid Schoolers
- High Schoolers
- Collegiate Students

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	7705	9610	6968	9607

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

Patent Applications Submitted

Year: 2014
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	1	0	1

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Numbers and participants in: Citizenship Education Tours 4-H Clubs After-school Tech Academies (GIS, Social Media Education, Entrepreneurship, etc.) Youth Gardens Youth Cattle and Goat Shows Group discussions Summer Camps

Year	Actual
2014	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Participant's knowledge, understanding, and application of science, technology, engineering and math concepts; application of technical skills to grow and prepare food items in, and on from the gardens; quality of cattle and goats participating in livestock shows; public speaking, marketing, decision-making and agrifood business and leadership.

Outcome #1

1. Outcome Measures

Participant's knowledge, understanding, and application of science, technology, engineering and math concepts; application of technical skills to grow and prepare food items in, and on from the gardens; quality of cattle and goats participating in livestock shows; public speaking, marketing, decision-making and agrifood business and leadership.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

In the Black Belt communities and other underserved youth communities in Alabama, there is a dismal paucity of opportunities to develop and nurture youth leadership, entrepreneurship, science and technology education; and other relevant core competencies necessary for highly proficient participation in their society. A lack of adequate exposure to a variety of entrepreneurial and leadership skills and practices, and lack of experiential learning opportunities and competitive exercises have resulted in youth not being effectively involved in civics and youth led roles in their communities, and not being highly motivated nor see the rewards of studying science, technology, engineering, agriculture, mathematics (STEAM) and other fields requiring intensive studying efforts.

What has been done

TUCE teams with partnering schools and other organizations to provide targeted experimental learning opportunities in youth leadership, entrepreneurship and business development, STEAM initiatives, and other subjects. Students learned and participated to establish, maintain and harvest school gardens while learning horticulture, food preservation, healthy recipe development, produce marketing and entrepreneurial skills. A goat show competition was held, where students studied in advance how to properly care for, feed, groom and show goats. A Smart Kids camp was held with many hands-on science, technology, engineering, agriculture and mathematics (STEAM) exercises. Science Fairs were developed for young scientists at local schools. Twenty students were sponsored to attend a 4-H camp where a variety of learning exercises involving subjects such as environmental, entrepreneurial, leadership and STEAM subjects were employed. An oratorical preparation workshop entitled "Youth Expressions through

Public Speaking" was held to offer specific public speaking techniques and practices to students in grades 6-12. A three-day 4-H Teen Leadership Retreat was held at the 4-H Camp in Columbiana, Alabama. Youth from nine counties came to the Tuskegee University campus for a full day Youth Empowerment Summit, offering experiential learning experiences in leadership, public speaking and other subjects to more than 100 youths. Another 56 youth attended the 71st Annual Professional Agricultural Workers Conference at Tuskegee University, where they participated in special sessions on subjects such as agricultural careers. An oratorical preparation workshop entitled "Youth Expressions through Public Speaking" was held to offer specific public speaking techniques and practices to students in grades 6-12.

Results

Students learned how to establish and cultivate vegetable gardens, the nutrition content of different vegetables, and how to prepare vegetables healthily. Many gained an appreciation for agriculture through school gardening and the goat show. Through environmental science exercises, students became more aware of the need to study chemical and biological sciences. Students created hands-on audio and visual displays to promote arts in agriculture, and set up displays for competition and at local fairs, festivals and conferences to depict the importance of agriculture. 4-H campers learned about environmental science, horticulture, animal husbandry, healthy eating habits, keeping physically fit, public speaking, entrepreneurship, the scientific process, leadership skills, eco-art and preparing healthy meals. Students learning public speaking were able to select topics, create graphic organizers, discuss communication weaknesses, practice listening techniques and delivered impromptu speeches.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Program outcomes were affected by economic conditions in the region and competing programmatic challenges, particularly where participants were required to pay registration/enrollment fees. In addition, school systems give priority to "academic" programs in order to catch up under state and federal policies and requirements to show progress, reducing therefore regular access to youth.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Post program evaluations showed that out of the students who participated in the financial management classes, the majority learned how to calculate simple budgets and had improved their math skills, while more than 50% acquired an understanding of business finance. Of the 42 students who attended classes on Mathematics of Inventory, all of them learned how to calculate profits and losses and acquired knowledge of profit margins. Also, 30 learned the difference between wholesalers and retailers and 22 learned how to calculate percentages for reinvestment. Another group of 54 students participated in the savings and decision making classes and from this group, 45 planned to open a savings account, 54 planned to improve their spending habits, and 18 planned to develop long term saving plans with parents. Overall, follow-up evaluations of the entire group of more than 180 based on random subjects indicated that 51 students practiced budgeting, 88 had improved Math skills, 42 students have opened savings accounts and 59 students have improved their spending habits.

Key Items of Evaluation

Following reports from the Youth Empowerment Summit, its continued implementation as an annual conference will provide an opportunity to motivate and inspire youth in the region to have a positive outlook about their futures. The infusion of the 4-H program template and integrated research-outreach opportunities will remain the primary components of this program area.