

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

**Program # 8**

**1. Name of the Planned Program**

4-H Youth Development

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

1. Program Knowledge Areas and Percentage

| KA Code | Knowledge Area                              | %1862 Extension | %1890 Extension | %1862 Research | %1890 Research |
|---------|---|-----------------|-----------------|----------------|----------------|
| 608     | Community Resource Planning and Development | 4%              |                 | 100%           |                |
| 806     | Youth Development                           | 96%             |                 | 0%             |                |
|         | <b>Total</b>                                | 100%            |                 | 100%           |                |

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

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

| Year: 2010 | Extension |      | Research |      |
|------------|-----------|------|----------|------|
|            | 1862      | 1890 | 1862     | 1890 |
| Plan       | 65.0      | 0.0  | 0.0      | 0.0  |
| Actual     | 100.0     | 0.0  | 0.5      | 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    |
| 1206593             | 0              | 2653           | 0              |
| 1862 Matching       | 1890 Matching  | 1862 Matching  | 1890 Matching  |
| 1206593             | 0              | 2653           | 0              |
| 1862 All Other      | 1890 All Other | 1862 All Other | 1890 All Other |
| 10500000            | 0              | 16976          | 0              |

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

1. Brief description of the Activity

30 - VMS - Recruit, orient and train adult volunteers to serve as club and project club leaders and to assume leadership on committees who plan and coordinate local and county activity and events.

30 - CMS - Increase the number of 4-H project clubs or project groups within community clubs.

20 - LCD Impact Team - Recruit and train teams of youth and adults, who work in partnership to identify, organize, conduct and evaluate a service learning project which will benefit the community.

27 - EE Impact Team - Provide training and materials for initiating and maintaining teams of youth and adults committed to sharing and promoting environmental education concepts through service learning.

30 - OMK - Train and recruit educators and volunteers to create public awareness of issues affecting military families.

28 - STEM - Provide training and materials for initiating and maintaining teams of youth and adults committed to sharing and promoting STEM concepts through service learning.

30 - All other - Establish, develop, and maintain new and ongoing youth development programming, events, and support materials.

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

Youth, children, parents, teachers, youth and adult volunteers, middle to low income families; race and ethnicity will also be recognized as an identifier of audiences; caretakers, agencies and service providers, schools, policy makers

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

**1. Standard output measures**

| 2010          | Direct Contacts Adults | Indirect Contacts Adults | Direct Contacts Youth | Indirect Contacts Youth |
|---------------|------------------------|--------------------------|-----------------------|-------------------------|
| <b>Plan</b>   | 1000                   | 5000                     | 2500                  | 12500                   |
| <b>Actual</b> | 19050                  | 1000000                  | 997355                | 7087988                 |

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

| 2010 | Extension | Research | Total |
|------|-----------|----------|-------|
|------|-----------|----------|-------|

|               |   |   |   |
|---------------|---|---|---|
| <b>Plan</b>   | 2 | 2 |   |
| <b>Actual</b> | 0 | 0 | 0 |

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

**Output Target**

**Output #1**

**Output Measure**

- Web-delivered curriculum - lessons developed and tested

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2010        | 1             | 12            |

**Output #2**

**Output Measure**

- Educational trainings offered for volunteers and staff

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2010        | 5             | 55            |

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

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

| O. No. | OUTCOME NAME  |
|--------|---|
| 1      | Certified participants will manage local programming  |
| 2      | Caring and qualified adults will prepare youth for successful lives as community leaders and contributing citizens  |
| 3      | The number of active 4-H project clubs and project groups.  |
| 4      | Project curriculum in support of Mission Mandates   |
| 5      | Youth will develop a well rounded understanding of mental and emotional health obtained through project work and activities which encourage healthy life style choices - camping, recreation, shooting sports, fitness, safety, hobbies and creative pursuits through the arts.   |
| 6      | Youth and adults work in partnership to identify and solve/resolve community needs and environmental issues through an organized and executed plan of action.   |
| 7      | Youth will learn to make healthy lifestyle choices through the use of curricula and educational materials.  |
| 8      | Increased number of collaborations with youth organizations   |
| 9      | Participant teams will increase knowledge of Oklahoma natural resources and environmental stewardship.  |
| 10     | Participants in livestock programs will focus on acceptable animal husbandry practices, demonstrating knowledge about animal health, breeding, production, marketing and meat science while being conscientious about product quality assurance, animal welfare/well-being and protection and effects on the environment. |
| 11     | Participants will increase knowledge and awareness of STEM technologies and career opportunities.   |
| 12     | Participants will increase knowledge and awareness of plants and soil systems.  |
| 13     | Increase knowledge and awareness of entomology.   |
| 14     | Companion animal programs will focus on animal welfare and human-animal interaction.  |
| 15     | Military families receiving support through 4-H partnerships will increase their use of local support networks  |

## **Outcome #1**

### **1. Outcome Measures**

Certified participants will manage local programming

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

- 1862 Extension

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

Change in Action Outcome Measure

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

| <b>Year</b> | <b>Quantitative Target</b> | <b>Actual</b> |
|-------------|----------------------------|---------------|
| 2010        | 1000                       | 2180          |

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

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

Youth and families expect CES to provide a safe inclusive environment for positive youth development. 4-H volunteers are essential partners in creating a positive environment by focusing on the strengths of youth and providing positive ways for youth to meet their basic needs. CES is responsible for educating adult volunteers on positive youth development principles and practices to ensure programs generate opportunities for young people to reach their potential.

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

Extension Educators have been provided training and materials for managing risk, volunteers and clubs at the local and county levels. Staff have been provided the philosophy and guiding principles for youth development through 4-H for Century III training. Volunteers who have been certified annually participate in four continuing education opportunities which draw upon core information found in three units of 4-H Volunteer Core Competency Curriculum. 4-H Professional Research Knowledge and Competencies (PRKC) for Extension Educators was provided through Everyone Ready an online volunteer management staff development plan. Subject matter training conducted for educators and volunteers in WHEP, Shooting Sports, Forestry, Equine, Goat Science, state and district volunteer conferences, Companion Animal Citizenship, Video Production, Entomology, SET, Junior Master Gardner, Entomology Zoo, OMK (Military 4-H), Primitive Camping, Camp Safety.

#### **Results**

Volunteer certification program exists in 76 counties. 2180 certified adult and teen volunteers were reported to provide leadership to 993 4-H clubs and 950 short-term/special interest project groups. 40,802 youth were serviced by local 4-H clubs/project groups.

#### 4. Associated Knowledge Areas

| KA Code | Knowledge Area    |
|---------|-------------------|
| 806     | Youth Development |

#### Outcome #2

##### 1. Outcome Measures

Caring and qualified adults will prepare youth for successful lives as community leaders and contributing citizens

Not Reporting on this Outcome Measure

#### Outcome #3

##### 1. Outcome Measures

The number of active 4-H project clubs and project groups.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2010 | 700                 | 1943   |

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

#### 4. Associated Knowledge Areas

| KA Code | Knowledge Area    |
|---------|-------------------|
| 806     | Youth Development |

## **Outcome #4**

### **1. Outcome Measures**

Project curriculum in support of Mission Mandates

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

- 1862 Extension

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

Change in Knowledge Outcome Measure

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

| <b>Year</b> | <b>Quantitative Target</b> | <b>Actual</b> |
|-------------|----------------------------|---------------|
| 2010        | 15                         | 30            |

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

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

Curriculum has been defined as anything that is planned to bring about a change in behavior. 4-H curriculum provides the framework for learning through 4-H. 4-H curriculum, to some extent, determines the effectiveness and strength of the total 4-H program. Today the Internet is loaded with information but it is often not research based or age appropriate and fails to lead youth through subject matter topics (projects) at their own pace.

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

Oklahoma 4-H curriculum focuses on experiential, activity-based learning of life skills related to 4-H member project work. Curriculum materials were developed in conjunction with Extension Specialist and county staff to meet the demands of busy 4-H members and volunteers. Many pieces of our new curriculum have been developed in the "Grab and Go" format for easy on-line access. Before new 4-H curriculum materials are released, they are piloted to ensure they meet standards for quality and usefulness.

A statewide curriculum in-service was held for 54 Extension educators. Participants experienced how the use of 4-H curriculum materials can lead to desired project outcomes and stimulate the interest of 4-H members. Forty-two 4-H volunteers experienced a similar session at during 4-H Parent Volunteer Conference.

#### **Results**

Thirty new pieces of Oklahoma 4-H curriculum are available to support 4-H member life skill development and project work.

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

| <b>KA Code</b> | <b>Knowledge Area</b> |
|----------------|-----------------------|
|----------------|-----------------------|

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806 Youth Development

### **Outcome #5**

#### **1. Outcome Measures**

Youth will develop a well rounded understanding of mental and emotional health obtained through project work and activities which encourage healthy life style choices - camping, recreation, shooting sports, fitness, safety, hobbies and creative pursuits through the arts.

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

- 1862 Extension

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

Change in Condition Outcome Measure

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

| <b>Year</b> | <b>Quantitative Target</b> | <b>Actual</b> |
|-------------|----------------------------|---------------|
| 2010        | 36                         | 51417         |

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

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

An assessment of the life skill and practice of 4-H record keeping indicate fewer members are doing project work for a sustained period of time. As a result, there is a decline in the development of a well balanced set of life skills ? relating/caring; managing/thinking; giving/working; and living/being. Positive youth development research has shown that youth gain the greatest benefit from an experience when there is long-term contact with a caring and significant adult.

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

Staff development was done educators and volunteers related to health using ?Health Rocks?, ?Farm to You?, ?Food Showdown? and various items through a Walmart Health grant and the Healthy Oklahoma Impact team.

##### **Results**

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

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

**Outcome #6**

**1. Outcome Measures**

Youth and adults work in partnership to identify and solve/resolve community needs and environmental issues through an organized and executed plan of action.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2010 | 10                  | 10     |

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

**Issue (Who cares and Why)**

Our natural resources are finite and must be protected. Teaching youth to make wise environmental decisions rather than re-train them as adults is the most effective way to help them become good environmental stewards.

**What has been done**

Positive youth development opportunities contribute to the economic stability of a community. To strengthen human capital, 66 teams of teens (716) and adult mentors (262) were trained to embark on issue based programming. As a result, 51 action plans were developed and 33 completed. Healthy sustainable community projects include - international programming with students from Turkey; the planting of 300 trees and \$65,000 in natural capital in one community which sustained multiple natural disasters over a two year period; mapping four city parks, water wells and sewer lift stations for city leaders and the development of responsible proactive youth learning to be community partners. Five-hundred and ten hours contributed to six forms of capital: natural, cultural, human, social, civic/political, and economic/financial.

Since 2000, 4-H Programs across the state have selected the Ronald McDonald Pop tab collection program as an environmental education community service project. County 4-H programs have reported collecting over 1500 pounds of pop tabs. At an average of 75 cents per pound, this effort has raised more than \$1100 to support families living in the Ronald McDonald House while a sick child is being treated in the hospital. Other county 4-H programs have collected over 2000 pounds of aluminum cans to raise support for local 4-H clubs. Lincoln county 4-H teamed up with the local sheriff and courthouse personnel to collect and recycle 900 ink jet cartridges to protect landfills and water quality.

This year, Washita county 4-H celebrated Earth Day with a plastic recycling drive and collected 3000 plastic water bottles. As an extension they also added a recycling theme to their summer camp program and used recycled materials to make crafts, and each family went home with a

recycling bin.

Water conservation has become a mainstay of Oklahoma 4-H's environmental education programs. Beckham County 4-H taught 285 youth about water quality explaining to them that water is not clean just because it is clear. Plus they demonstrated how ground water can be contaminated by industry, agriculture and homeowners. Oklahoma and Canadian Counties have been taking the same message to completely different audience by teaching urban youth the value of water conservation and how to protect ground water in the city. They have reached over 16,000 youth and families with their environmental education efforts.

NRCS and Okfuskee County OCES teamed up to hold "Fantastic Fridays" for youth ages 5 to 12. Sixty eight youth learned about water quality, water conservation, and recycling.

### **Results**

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## **4. Associated Knowledge Areas**

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

### **Outcome #7**

#### **1. Outcome Measures**

Youth will learn to make healthy lifestyle choices through the use of curricula and educational materials.

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

- 1862 Extension

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

Change in Knowledge Outcome Measure

### 3b. Quantitative Outcome

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2010 | 5000                | 8765   |

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

According to the 2007 State of the State Report, Oklahomans are below average or failing in several indicators of good health. As a State, our citizens tend to not eat enough fruits and vegetables each day. Many citizens are overweight or obese; get little or no physical activity and too many Oklahomans use tobacco.

Diabetes, high blood pressure, high blood cholesterol, stroke, heart disease, asthma, lung cancer ? these are all negative consequences of the unhealthy lifestyles Oklahomans are living.

#### What has been done

4-H received a grant from the Walmart Foundation to which allowed counties to conduct local health education programs.

Youth were presented with educational programs related to healthy eating choices, use of substances, delaying sexual activity, and driving distracted.

Our projects began with four district youth conferences in October 2009 which was described in the mid-term report. Out of that event 47 mini-grant to local 4-H projects were funded. Some of those highlights follow.

In 9 counties projects focused on getting citizens to move more and eat less. Using Wii Fit computer programs purchased at Walmart, the educators conducted lessons on good nutrition and participants engaged in group physical fitness activities. In every county the educators indicated the participants reporting a loss of weight and BMI as indicated by the Wii exercise board estimator. In one county a young man has lost 50 pounds as a result of lifestyle changes he has made using the combination of the nutrition project and the Wii Fit. He has begun to run 1.5 miles per day in addition to eliminating sodas and snacks from his diet. In many counties both youth and adult fitness challenges have emerged.

In Tulsa County, Nutrition Education staff and volunteers were trained to conduct lessons in the classroom using whole grains. Using an Oklahoma Ag in the Classroom activity and additional nutrition education information they made Tortillas in a bag they have reached over 1200 3rd and 4th grade students with nutrition lessons along with action songs that included nutritional messages and physical activity.

Two of our State 4-H Leadership Team members took on projects of their own. Ashlan Wilson trained a team of other 4-H members who then conducted health education programs in schools in her county. In her own school she reached 233 elementary students through activities related to personal hygiene, primarily hand washing. School officials credit Ashlan with helping to reduce the spread of season colds and flu as a result of her lessons for elementary students.

State Secretary, Taler Sawatzky was moved to action after learning about the practice of female circumcision in Kenya and decided to involve other 4-H members in a campaign to raise money to send to Kenya to support the work of Outreach programs through Moi University that are being

used to replace this practice with education as a right of passage for girls. She has shared brochures and information with over 10,000 people so far and has had an opportunity to meet with educational leaders from Moi University and the government of Kenya as a result of her efforts. (this number not included in the WM Grant total).

### **Results**

All of the local projects have allowed citizens to learn through workshops demonstrations and hands-on activity the importance of better nutrition and the need for increased fitness. While no scientific analysis has been done and the duration of the grant was not enough to measure long-term impact on health, participants indicate short-term changes in regard to the foods they select, portion sizes, and the amount of physical activity.

Our State 4-H Vice President who has lost over 50 pounds as a result of this grant has shared his success story with countless other youth via Facebook, an interactive display at the World's Largest Youth Livestock Show, and through speaking engagements as a state officer.

The other teen working on the Kenya project has been able to share her story with international visitors and her video conversation with Kenyan leaders has been on YouTube and Facebook. The long-term impact will make life better for girls have way around the planet from her, but still she sees this as part of making her world community better.

## **4. Associated Knowledge Areas**

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

### **Outcome #8**

#### **1. Outcome Measures**

Increased number of collaborations with youth organizations

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

- 1862 Extension

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

Change in Action Outcome Measure

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

| <b>Year</b> | <b>Quantitative Target</b> | <b>Actual</b> |
|-------------|----------------------------|---------------|
| 2010        | 15                         | 14            |

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

4-H Educators often attempt to solve critical issues without reaching out to other partners who have resources that might be useful in addressing those issues.

#### What has been done

4-H Faculty and Staff worked with numerous campus-wide faculty to develop new programs. The 4-H Food Showdown is collaboration with Hotel and Restaurant Administration, Nutritional Sciences, Food and Ag Product Center and numerous commodity groups, including the Made in Oklahoma Collation.

Meetings were held with the district council leaders of Boys and Girls Scouts, National Guard Youth Programs, Boys and Girls Clubs, youth workers on all active duty installations, the Red Earth Council in OKC, education directors of OKC Zoo and OK Science Museum, Farm Bureau, FFA, American Farmers and Ranchers and several commodity group reps on the Ag in the Classroom Advisory Board.

Extension Educators in Oklahoma, Cleveland, McClain, Canadian, and Pottawatomie combined efforts to plan and conduct a two-day educational workshop for workers and leaders in various youth serving agencies. The conference allowed a time for participants to learn about one and another programs but also an opportunity to conduct some general training on youth development, volunteer management, risk managements and related topics. Over 67 participated in the event. As a result of the meeting a new 4-H club is being established in John Marshall School system, a traditionally at-risk school.

#### Results

Minority youth are often less inclined to graduate from high school and to seek an advanced degree. This population of is at greater risk of engaging in early sexual activity which results in teen pregnancy.

What was done: A grant was written and obtained from National 4-H Council and the US Department of Juvenile Justice to create a 4-H mentoring program in OKC with two high risk groups. Faculty in FCS and 4-H have collaborated to secure a \$85,000+ grant to implement a Latino Mentoring program in OKC. Two staff from the Latino Agency have been employed to work with mentors and youth who are meeting weekly to explore careers and to learn more about 4-H.

### 4. Associated Knowledge Areas

| KA Code | Knowledge Area    |
|---------|-------------------|
| 806     | Youth Development |

#### Outcome #9

##### 1. Outcome Measures

Participant teams will Increase knowledge of Oklahoma natural resources and environmental stewardship.

##### 2. Associated Institution Types

- 1862 Extension

### 3a. Outcome Type:

Change in Knowledge Outcome Measure

### 3b. Quantitative Outcome

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2010 | 15                  | 0      |

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

The 4-H Shooting Sports program is designed to assist young people in personal development, the establishment of personal environmental ethics, and the exploration of life-long vocational and avocational activities. The program uses experiential learning and positive interactions with youth and adult role models to help young people develop self-concept, self-assurance and a positive self-image.

The content provides a framework of knowledge and skills for lifetime participation in recreation, hobbies and careers related to shooting sports and wildlife. Core concepts stress safety, ethical development, personal responsibility and life-time recreational skills.

#### What has been done

?Nearly 6000 youth are enrolled in the Shooting Sports and they need trained volunteers to instruct them regarding safe use of sporting arms, environmental ethics, and sportsmanship. In 2010, 76 new volunteers were trained and began working with youth in clubs.

?While most of the youth involved in SS would likely not become delinquents, some may be inclined to become involved in at risk behaviors if not involved in programs that encourage discipline. The estimated cost to keep one juvenile delinquent housed in a correctional facility is close to \$55,000 per year. In a survey of youth and families in Texas, the estimated cost for a youth to participate in 4-H shooting sports was about \$4,000 a year.

?696 youth competed in one or more state shooting sports contests. Each of these youth had received a minimum of 8 hours of instruction before competing.

?In collaboration with OHE, two educational lessons were developed for their club members. The lessons were also used with 4-H audiences.

?Working with the Jenks Aquarium, The OKC Zoo and Oklahoma Science Museum, camps were conducted that reached over 4500 youth with messages about science and the environment.

?2009 National Conference Back Home Action Plan was a program called STEP: Students Tackling Environmental Problems. The State 4-H Leadership Council offered the program as a Traveling Workshop to be conducted at the county level for club and teen leaders.

#### Results

?Over 10% of the youth enrolled in the 4-H Shooting Sports program participated in one or more of the 10 state level competitive events offered to members.

#### 4. Associated Knowledge Areas

| KA Code | Knowledge Area    |
|---------|-------------------|
| 806     | Youth Development |

#### Outcome #10

##### 1. Outcome Measures

Participants in livestock programs will focus on acceptable animal husbandry practices, demonstrating knowledge about animal health, breeding, production, marketing and meat science while being conscientious about product quality assurance, animal welfare/well-being and protection and effects on the environment.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2010 | 7000                | 12000  |

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

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

Youth need to learn acceptable animal husbandry practices, to demonstrate knowledge about animal health, breeding, production, marketing and meat science while being conscientious about product quality assurance, animal welfare/well-being and protection and effects on the environment.

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

Collaborating with the Oklahoma and National Pork Councils educators continued and expanded the use of the Pork Quality Assurance Plus (PQA Plus) youth education and youth certification program.

###### **Results**

Approximately 7000 youth 8-18 years of age in both 4-H and FFA programs were certified in the PQA Plus program as part of their county pork project and enabled them to show at the Oklahoma Youth Expo and the Tulsa State Fair. As a result of this program there has been a decrease in stress related deaths in exhibition animals and a more marketable meat product.

#### 4. Associated Knowledge Areas

| KA Code | Knowledge Area |
|---------|----------------|
|---------|----------------|

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806 Youth Development

### **Outcome #11**

#### **1. Outcome Measures**

Participants will increase knowledge and awareness of STEM technologies and career opportunities.

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

- 1862 Extension

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

Change in Knowledge Outcome Measure

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

| <b>Year</b> | <b>Quantitative Target</b> | <b>Actual</b> |
|-------------|----------------------------|---------------|
| 2010        | 100                        | 17544         |

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

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

The US is falling dangerously behind other nations in developing its future workforce of scientists, engineers, and technology experts. Only 18% of US high school seniors are proficient in science (NAEP, 2005). Oklahoma 4-H is combating this issue by teaching youth about STEM.

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

Oklahoma's main vehicle for educating youth about science, technology, engineering, and math has been the 4-H Geospatial Institute. For 2010, this program was expanded from just geospatial technologies to include, digital photography, videography, and robotics, which became the 4-H STEM Institute. The STEM Institute was designed to train teams of youth and adult in the use and application of technology. These teams were then charged with the tasks of applying their technology specialty to a community service project or the development of a special project club. Once their project is established or complete the team was then expected to go teach other youth about their program and their technology.

##### **Results**

###### **Digital Media**

Nine teams of youth and adults were trained in videography and digital photography. These teams were expected to create digital media with the intent of creating awareness of an issue affecting youth. Each group took a unique approach to their project. Projects ranged from Bullying to Nutrition, Life on a Military Installation to how to give a 4-H presentation, and of course, all about 4-H. Creek County created podcasts of veterans. These videos were showcased at events for friends and family. Several of the videos were shown as school educational pieces. Teams held educational events to share their knowledge with other youth. The Creek County 4-H team invited military youth to a special training to help them tell their story with digital photography and podcasting.

#### Geospatial

Geospatial projects are about teaching youth how to think spatially. This is done by training them in GPS/GIS. Once trained, the teams of youth and adults are expected to apply the GIS technology. Currently five county teams are working on geospatial projects. Each of these groups has been teaching GPS workshops during summer camps, through school enrichment programs, and other venues. In addition to presenting workshops, these teams are partnering with local agencies to create maps as a community service. As an example Washita County 4-H partnered with the Cordell Fire Department to locate and map fire hydrants, the Noble County team mapped all the 4-H Shooting Sports clubs, Cleveland County team has been teaching younger 4-H member how to geocache and think spatially, Comanche County group created maps for the county fair and is seeking a grant to further their GIS knowledge and competencies.

#### Robotics

Six county 4-H groups learned about engineering and robotics. These groups have set up informational displays, and workshops. Robotics is a new addition to our STEM institute. This program is proving to be exciting and drawing a lot of interest from 4-H groups across the state.

### 4. Associated Knowledge Areas

| KA Code | Knowledge Area    |
|---------|-------------------|
| 806     | Youth Development |

#### Outcome #12

##### 1. Outcome Measures

Participants will increase knowledge and awareness of plants and soil systems.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2010 | 500                 | 12292  |

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

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

Plants are vital to life on earth. They improve air and water quality, control erosion, provide food and medicine for animals, and have great aesthetic value as well. Children involved in plant science projects increase their agricultural literacy and generally become healthier through

physical activity and increased knowledge of healthy eating.

### **What has been done**

The OSU Department of Horticulture and Landscape Architecture and the OSU Department of Plant and Soil Sciences have facilitated plant and soil education for youth in Oklahoma through many activities, productions, and programs. Both departments have sponsored residential academies for youth to experience career-related activities in the plant sciences, hosted judging contests at the state fairs, provided workshops for youth and adults at conferences across the state, and have visited individual classrooms and youth groups throughout the state. Activities in 2010 include:

Presentations about Junior Master Gardener (JMG) ? Horticulture Industries Show (for industry professionals in OK/AR), Grove Home and Garden Show, Guthrie Home and Garden Show, Native American Horticulture Conference, Kay County Master Gardeners, Payne County Master Gardeners, Riverfield Country Day School (Tulsa, OK), Encyclomedia (state teacher conference), Ornamental Plant Materials Conference, Global Horticulture Conference  
College/Career day presentations ? Shawnee Ag Futures Conference (central OK FFA students), Career Paths Expo (all 8th graders in Payne County), Oklahoma Youth Expo (Oklahoma 4H/FFA state livestock show), Stillwater Regional Career Fair, OSU Up-Close  
Educational workshops ? ?Plants in the Classroom? (semester-long course for teachers interested in incorporating gardening into their curricula), training for Health and Nutrition from the Garden (JMG curriculum) for Oklahoma educators, ?Sow, Hoe, and Grow? Ag in the Classroom State Conference, two trainings for JMG basic curriculum for Oklahoma educators  
Presentations to Youth ? Stillwater High School biology class, Bixby YMCA 4-year-old program, OK Science Fest (Oklahoma 4th and 5th graders), Women in Science Conference (girls from around Oklahoma), OSU GardenFest, two visits to summer food program at Skyline Elementary (Stillwater, OK), 4H Roundup, Richmond Elementary (Stillwater, OK), Dove Science Academy (Oklahoma City, OK)  
Productions ? 3 episodes for ?Oklahoma Gardening? TV show  
Contests ? FFA Career Development Events (floriculture, nursery/landscaping, agronomy), Oklahoma State Fair, Oklahoma/Arkansas State Fair (Ft. Smith, AR), Tulsa State Fair  
Residential Camps ? Grandparent University, Tomorrow?s Undergraduates Realizing the Future (?Camp TURF? ? 2 weeks of career-related activities for 25 first-generation college students from Oklahoma high schools), Plant Science Academy  
Multi-State/National Conference Presentations ? National Children and Youth Gardening Symposium (Los Angeles, CA); National Summer Learning Association National Conference (Indianapolis, IN); Southwest Region - American Science Teacher Educators (Stillwater, OK)

### **Results**

There was an increase in the number of registered Junior Master Gardener groups over previous years (5 new groups in 2010; 1 new group in 2009).

There was an increase in the number of 4H youth participating in the Oklahoma State Fair horticulture judging contest (42 in 2010; 38 in 2009).

There was an increase in the number of FFA youth participating in the Floriculture CDE contest (64 in 2010; 56 in 2009).

Students in Camp TURF were given pre- and post-surveys on a variety of subjects related to college preparation and attendance, as well as horticulture and landscape architecture. They used a Likert scale in their responses (1= strongly disagree, 5 = strongly agree). A sample of the

results is below.

2010 TURF SURVEYSprepostDifference

I would like to go to college.4.8754.8125-0.0625  
 I would feel comfortable around other students at college. 4.254.6250.375  
 I know how to find answers to my questions about college. 3.754.31250.5625  
 I know how to apply to college.2.8753.68750.8125  
 I know how to apply for financial aid.2.6253.81251.1875  
 I know what classes to take to get ready for college.3.754.56250.8125  
 I have the skills to be successful in college. 3.8754.1250.25  
 Horticulture careers are important to society.3.93754.31250.375  
 Landscape design involves creativity.4.54.81250.3125  
 Horticulture and landscaping careers can be fun.4.18754.31250.125  
 Landscape architects can make landscaping eco-friendly.4.18754.43750.25  
 There are a lot of different careers in horticulture.44.68750.6875  
 Science is something that only happens in a lab.1.81251.5-0.3125  
 I feel comfortable doing science.4.31254.25-0.0625  
 I am interested in a career in horticulture.33.3750.375  
 I am interested in a landscape contracting career.2.93753.06250.125  
 I am interested in becoming a landscape architect.2.87530.125  
 I am interested in running a greenhouse.3.06252.5625-0.5  
 I am interested in turf management.3.31252.875-0.4375

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area    |
|---------|-------------------|
| 806     | Youth Development |

**Outcome #13**

**1. Outcome Measures**

Increase knowledge and awareness of entomology.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
|------|---------------------|--------|

2010

750

380

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

All people on the planet rely upon insects for the ecological services they render?valued at \$57 billion dollars, annually. Human agriculture is integrally connected to the life cycles, functions, and biologies of insects and their relatives. Insects are also a serious health concern because they kill more than 2 million people each year due to diseases.

#### What has been done

We have met with 4-H to educate them on the importance and fascination of insects. We have begun the revision of the 4-H entomology curriculum handbooks and the digitization of the curriculum to make it available online. We offer training for 4-H entomology projects. We published a coloring book on insects. The Insect Adventure provided an entomology unit at 4-H Military Camp; we provided 2 workshops on entomology at 4-H Ag Round up; we provided an entomology presentation at the Collegiate 4-H Conference; and we met with 2 Oklahoma 4-H clubs at the facility. The Insect Adventure maintains 40+ species of arthropods to be able to provide hands-on educational activities to people across Oklahoma.

In addition in more general settings, in 2010, the Insect Adventure gave more than 140 individual presentations at both the Insect adventure facility and at locations throughout the state. These included the OKC State Fair, numerous County Fairs, the Wildlife Expo, Grandparent University, Insect Camp, Boy Scout Camp, as well as classroom visits. The Wildlife Expo had more than 51,000 attendees, and the OKC State Fair recorded more than 300,000 individuals that passed thru the building that the Insect Adventure kiosk is located in.

All, except the State Fair, were hands-on presentations with living arthropods where the message delivered was directed toward increasing an individual?s understanding of the impact and importance of this group of animals and the science surrounding them.

#### Results

There are an increased number of presentations being given to 4-H youths, leaders, volunteers, and educators regarding the value of insects and their interconnectedness with humans. Discussions involving arthropods in agriculture, ecological services, human and animal health, and food webs were completed. A better understanding of the interconnectedness of the living organisms on the Earth?including insects?will help 4-Hers become better stewards of the planet, better citizens, and caring environmentalists. Increased understanding and appreciation of the discipline of entomology through hands-on exploration will also address the STEM crisis in the US by helping people discover a fascination with science at a young age.

### 4. Associated Knowledge Areas

| KA Code | Knowledge Area    |
|---------|-------------------|
| 806     | Youth Development |

## **Outcome #14**

### **1. Outcome Measures**

Companion animal programs will focus on animal welfare and human-animal interaction.

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

- 1862 Extension

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

Change in Knowledge Outcome Measure

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

| <b>Year</b> | <b>Quantitative Target</b> | <b>Actual</b> |
|-------------|----------------------------|---------------|
| 2010        | 30                         | 200           |

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

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

The CDC reports that 2% of the US population suffers from dog bites each year. 1 in 6 of these bites will require medical attention and two thirds of them will be children. Approximately 70% of all fatal attacks involve children less than 10 years of age. According to the CDC most dog bites can be prevented with proper education. In order to decrease dog bite prevention children need to learn how to be safe around dogs and owners need to learn the importance of being responsible dog ownership.

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

This year the Extension Office in Pawnee, OK incorporated Dog Bite Safety into the Pawnee Schools 5th grade Ag Safety Day program. Over 100 youth were taught how to: safely avoid stray dog encounters, safely approach their friends and families dogs, techniques to follow in case of a dog attack and how to recognize aggressive behaviors in dogs.

#### **Results**

Providing education and resources for teaching bite prevention safety to adult 4-H volunteers and 4-H Educators is key in reaching young people throughout the state. The following trainings provided education in bite prevention and free resources including handouts and video to volunteers: State 4-H Volunteer Leader Training to 25 adult volunteers, NW District 4-H Volunteer Training to 6 volunteers, Logan County Volunteer Training to 12 volunteers and State 4-H curriculum in-service to 15 4-H Extension Educators.

## **4. Associated Knowledge Areas**

| <b>KA Code</b> | <b>Knowledge Area</b> |
|----------------|-----------------------|
|----------------|-----------------------|

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806 Youth Development

### **Outcome #15**

#### **1. Outcome Measures**

Military families receiving support through 4-H partnerships will increase their use of local support networks

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

- 1862 Extension

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

Change in Knowledge Outcome Measure

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

| <b>Year</b> | <b>Quantitative Target</b> | <b>Actual</b> |
|-------------|----------------------------|---------------|
| 2010        | 100                        | 1233          |

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

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

The Oklahoma National Guard amongst other branches are facing numerous and frequent deployments with 3,500 troops leaving in 2011 having been the largest deployment since the Korean War affecting individuals from all 77 counties. Military service members are deploying by the thousands at Ft. Sill and Tinker AFB annually. Military Kids that are affected by deployment are over looked and often put off as delinquent children, as a reaction to deployment stress in the school system, in rural counties, and urban communities. Raising awareness and keen sense of vigilance to the sensitivity of the issues facing military kids is important as to build a stronger, more focused, fighting military force and resulting in a safer America.

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

A Military Community Support Luncheon program is conducted in pre-selected towns every month throughout the year to inspire the creation of a local support networks. The creation of two 4-H National Guard Clubs has been made through a close partnership and network with the Oklahoma National Guard. Seven Camping opportunities were provided to military kids and their family to help cope with the stresses of deployment and reintegration upon returning. A Speak Out Military Kids camp was conducted to empower military teens to express their stories and raise awareness of the issues facing military kids. Ten RSG trainings and seven informational briefings were conducted to educate the Oklahoma communities and develop vigilance and understanding to develop support during the deployment cycle. The partnership with OMK and State 4-H Capitol day, to educate legislators on the issues facing military kids, resulted in a \$10 personal check from a representative to show his desire to support military. A fund raising initiative with Frontier City and White Water Bay resulted in \$350 to the 4-H Foundation to be used for military kid support. Presentations were conducted to 4-H youth while preparing and fostering connection to military kids through the Hero Pack project.

## Results

### 4. Associated Knowledge Areas

| KA Code | Knowledge Area    |
|---------|-------------------|
| 806     | Youth Development |

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

##### External factors which affected outcomes

- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

##### Brief Explanation

#### V(I). Planned Program (Evaluation Studies and Data Collection)

##### 1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

##### Evaluation Results

{No Data Entered}

##### Key Items of Evaluation

{No Data Entered}