

Logic Model 4-H SET

Inputs

- KY4-H Foundation supports county programs through SET grants
- Counties apply for SET grants for software, materials
- State staff for SET trains volunteers and county staff in SET programs
- KY 4-H build alliances with schools, organizations and business

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Outputs

- KY 4-H counties conduct non-formal education learning activities for youth and volunteers in afterschool, enrichment, 4-H clubs and day and summer camp workshops
- KY 4-H agents provide opportunities to practice learned skills through 4-H SET programs
- KY counties teach youth about opportunities in science, engineering and technology related to careers
- Trained staff, volunteers, and youth support 4-H SET programs
- Local 4-H clubs develop partnerships with organizations, collaborations
- More county programs support SET clubs (in-school and afterschool)

Outcomes – Impact

Short Term

- Youth will increase interest and engagement in science, engineering and technology.
- Youth will learn new skills in science, engineering and technology .
- Youth will be Introduced careers in SET.
- Teens will participate in science, engineering and technology 4-H programs to acquire new skills.

Medium Term

- Youth will use and apply the skills gained from 4-H science, engineering and technology.
- Youth will demonstrate and share new abilities in science, engineering and technology with others.
- Youth will practice scientific methods learned in 4-H SET clubs.
- Teens will mentor younger 4-H'ers in science, engineering and technology.

Long Term

- Youth will utilize the scientific method to solve problems in their daily life.
- Youth will choose a career path in science, engineering or technology subject matter.
- Youth will utilize the scientific method in decision n making.

Situation

Youth will learn scientific research techniques, responsible practices and innovative technologies that positively address science, engineering and technology issues in Kentucky and globally. Through the Land Grant University and Extension system, 4-H can expand its impact and extend its reach in science, engineering and technology (4-H SET) by providing opportunities for hands-on scientific learning and discovery in 4-H clubs.

Assumptions

- Shortage of people to fill technology & related fields
- Need a diverse pool of trained scientists to frame and solve problems & educate others.
- Under-representation of women and minorities in STEM careers (1).
- Need for knowledgeable workforce to operate, service and maintain advancing robotic manufacturing and production technology

1. NSF Grant: GSE/EXT: National Girls Collaborative Project: Advancing the Agenda in Gender Equity for Science, Technology, Engineering, and Mathematics, Grant No. HRD-0631789.

External Factors

Youth experience formal education in schools which includes SET & mathematics area, No Child Left Behind (course content, testing, tutoring provided in schools).
*4-H non-formal experientially based programming addresses science ability (process) and science anchors (content) under guidance of trained (scientifically able) mentors, reaches diverse populations; an increased awareness of SET skills, content, and career possibilities increases engagement of youth in STEM careers.

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