



## 4-H Science, Engineering, and Technology (4-H SET)

4-H is strategically positioned to strengthen the U.S. global competitiveness and leadership in science, engineering and technology. As the youth development program of the Cooperative Extension System, 4-H is directly connected to the cutting-edge research and resources of the nation's 106 land-grant universities and colleges. 4-H Science, Engineering and Technology (SET) is one of the national mission areas of the 4-H youth development program. Currently, 4-H SET activities reach 5.9\* million youth with hands-on learning experiences that foster exploration, discovery and passion for the sciences. [\* Some youth were enrolled in more than one SET activity – duplications were not eliminated.]

### 4-H SET GOAL

By 2013, 4-H – a recognized leader in providing hands-on, non-formal learning experiences – will engage 1 million new youth in a dynamic process of discovery and exploration in science, engineering and technology so they are prepared to meet the challenges of the 21<sup>st</sup> century. 4-H SET will increase the number of 4-H youth pursuing college degrees and careers in science, engineering and technology by getting more youth interested in, changing their attitudes about and increasing their knowledge, skills and competencies in science, engineering and technology. The major areas of focus for 4-H SET are: Program Development and Design, Professional Development, Curriculum, Evaluation and Research, Communication and Marketing, Funding, and Partnership and Collaborations.

### PROGRAM DEVELOPMENT AND DESIGN

**Goal:** Youth and adults develop and deliver 4-H SET programs that are content and contextually valid to youth in a variety of settings and locations that meet the needs of diverse youth.

**Objective:** To increase the knowledge, skills, and competencies and improve the attitudes of youth in science, engineering and technology.

### PROFESSIONAL DEVELOPMENT

**Goal:** 4-H volunteers (youth and adults) and professionals are eager and well-prepared to incorporate science, engineering and technology in 4-H activities through a well-coordinated system of professional development opportunities.

**Objective:** To increase the knowledge, skills, competencies and comfort level of volunteers (youth and adults) and 4-H staff for offering hands-on, experientially-based 4-H science, engineering and technology learning experiences to youth.

### CURRICULUM

**Goal:** There is a wide variety of 4-H science, engineering and technology curricula that meet the National Science Education Standards (NSES) and the curricula review process established by National 4-H Headquarters and the curricula are available to the 4-H System and outside groups and organizations

**Objective:** To work with 4-H professionals, 4-H volunteers, land-grant university faculty, SET content experts and other partners (schools, museums, SET organizations, SET associations, industries, foundations, etc.) to revise and develop 4-H SET curricula that meet content and contextual standards.

## **EVALUATION AND RESEARCH**

**Goal:** There is an evaluation and research system in place to measure the effectiveness of 4-H SET programs in reaching the 4-H SET goals and objectives.

**Objective 1:** To increase 4-H staff and volunteers' knowledge, skills, and competencies for designing effective evaluation strategies for 4-H SET programming (process and outcome).

**Objective 2:** To design and implement a national long-term research model to compare 4-H youth and non-4-H youth SET outcomes.

## **COMMUNICATIONS AND MARKETING**

**Goal:** There is a strong, clear and consistent message about 4-H science, engineering and technology programs that is accepted, embraced and communicated by the Cooperative Extension System, land-grant universities, and 4-H SET partners.

**Objectives:** To increase the political, financial, and partnership support for 4-H SET programs.

## **FUNDING**

**Goal:** Public and private funds are used at the local, county, state and national levels to support 4-H SET programming.

**Objective:** To increase the capacity of the 4-H System (staff, volunteers and partners) to generate private and public funds to support 4-H SET programming.

## **PARTNERSHIPS AND COLLABORATIONS**

**Goal:** There are partnerships (formal and informal) between 4-H SET and SET professional associations, foundations, federal agencies, industry, and business and other youth organizations.

**Objective:** To increase the quality and availability of 4-H SET programs to one million youth.