



extension
IMPACTS

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Wyoming 4-H offers new excitement with science, engineering, technology programs

Situation:

America faces a significant challenge – young people are not prepared with necessary science, engineering (math), and technology (SET) workforce skills to compete in the 21st century. According to the 2005 National Assessment of Educational progress, only 2 percent of students attained advanced levels of science or math achievement by grade 12.

The National 4-H Council will focus efforts to increase educational opportunities and training for youths. National 4-H Council has been quick to establish partnerships with businesses such as the Noyce Foundation and Toyota U.S.A. Foundation, both based in California. Wyoming is also experiencing shortages in a SET skilled/trained workforce, thus giving Wyoming 4-H a tremendous opportunity for corporate partnerships.

The National 4-H Council convened 4-H educators from each of the 50 states at the National 4-H SET Liaisons Conference in June 2007. During this conference, the Wyoming SET liaison, who is the youth educator in Sublette County, and the UW state 4-H youth development specialist developed a draft SET plan of work for Wyoming 4-H.

A new competitive 4-H event, Showcase Showdown, featured SET projects and highlighted the aerospace (rocketry) project. The Wyoming State 4-H Office made a significant investment providing each county with basic rocketry supplies and kits. Three hundred and eleven youths were introduced to the rocketry project through educational programs during summer camps and project playdays. Forty leaders were trained at the State Leaders Conference, and 12 volunteers in seven counties assisted in implementing more intense educational sessions and competitive events such as county rocket launches.

Impacts:

The rocket launch at Showcase Showdown demonstrated success its first year. Rocketry members from seven counties competed in the open rocketry display and team contest. This event also served as a pivotal introduction for new SET programming to the public and as an invaluable mode of uniting youths and leaders from across the state with interests in SET programs.

Success on a state level was the increase in numbers of SET project members. The 2007-2008 statewide enrollment showed a 39-percent increase in robotics project members (108 total) and a 15-percent increase in aerospace enrollment (106 total).

The robotics project was first introduced as an after-school enrichment activity by Sublette County 4-H. The course was at peak capacity (with a waiting list) the day after enrollment opened. Its early success helped fuel the excitement and success of robotics within 4-H, including an increase in enrollment in county SET projects: aerospace (rocketry) increased from no member completing in 2007 to six in 2008; robotics numbers increased from one in 2007 to nine in 2008. Equipment and supplies necessary for starting SET projects were purchased from generous donations made by oil and gas industry partners in the community as well as matching funds from the University of Wyoming. Sublette School District No. 1 also provided much support in terms of space and resources for the program.

In Natrona County, a leader stated, "I've seen out of Wyoming youths a big willingness to learn more than just rockets but the entire aerospace field. There's been more than one group of youths who have come from knowing simply nothing about rocketry to great success. They've learned far more than one adult leader can possibly teach, consequently showing the level of interest and abilities these youths possess. To prove the point, there was a youth at Wyoming's state competition who would have placed 40th in the national competition, according to the score achieved on flights. All of this success demonstrates the power of 4-H and the "learn by doing approach" that together our youths can overcome any obstacle."

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