

Afterschool program activities shown to improve youth STEM skills

AT A GLANCE

The 4-H Common Measures survey showed that the Success Center Afterschool Program students improved their STEM skills.

The Situation

The Coeur d'Alene Tribe's Department of Natural Resources currently employs approximately 70 people in science and technician jobs. The Benewah Medical Center also employs approximately 150 people. However, participation and leadership in these fields requires a college degree. A lack of college-age, local youth choosing to study science, technology, engineering or math (STEM) fields has led to identification of a need to increase exposure to STEM activities in earlier grades. 4-H programming is well-positioned to provide STEM activities that build science skills in youth.

Our Response

UI Extension provided tutoring four days per week and provided 4-H activities once per week during the 2012-13 and 2013-14 school years. 4-H activities included STEM activities such as digital storytelling, lego robotics, gardening science, as well as art, scrapbooking, and cooking. These activities all require skill building that is relevant to STEM fields such as measuring, writing goals and keeping a log. A 4-H Common Measures survey was conducted in Spring of 2014 to assess skill building to 2nd through 5th graders in the 4-H Afterschool Program, *Success Center*, at Lakeside Elementary, Plummer, ID.



Lakeside Elementary 4-H Showcase Night. Photo: I. Mayes

Program Outcomes

In the 4-H Afterschool Program, *Success Center*, at Lakeside Elementary, the average number of years in 4-H is two (2). The average age of respondents is nine (9) years old. Of the respondents, 24% are boys and 76% are girls and 82% indicated that they are American Indian. None indicated that they are Hispanic and only one indicated a parent or guardian is in the military service. Eighty-two percent (82%) live in Benewah County and 18% live in Kootenai County.

Students who elected to take the survey indicated a high level of comfort in the 4-H Program. They feel confident speaking in front of others and working with adults and youth. The 4-H Program has supported them in feeling connected to their community and that they have made a difference in their community.

These results align with an Idaho 4-H 2002 study of 4-H participants that reports success in their confidence level, in school, in their community. The 2002 study indicates that 4-H Youth are more likely to take leadership roles in their school and community.

Confidence in Adults

In response to whether youth were comfortable sharing thoughts and feelings in the 4-H Program, over 70% agree or strongly agree. Seventy-six percent (76%) agree or strongly agree that they can use technology to express their ideas and 82% agree or strongly agree that they know who to go to if they need help with a problem. The responses indicate that students have a high level of comfort in the 4-H Afterschool Program.

Assessing Skills

In assessing their own skills as a result of the 4-H Program, over 70% of students agreed or strongly agreed that they always or usually listen well to others and are respectful of others (76%). Sixty-five percent (65%) feel confident to speak in front of others, and feel that they can work things out when others don't agree while 80% feel that they work well with other youth as a result of their 4-H Program.

Assessing Social Connectivity

In assessing their social connectivity as a result of the 4-H Program, 100% of respondents agree or strongly agree that that they can work well with adults. Eighty-eight percent (88%) agree or strongly agree that want to help others, that they have talents they can offer, and that they have made a difference in their community.

Program Evaluation

Overall youth felt that 4-H had improved their lives. Many youth reported 4-H as their favorite day of the week in the afterschool program.

Measuring skills and improvements help youth to understand what they are learning and how they are increasing their own skill set. Teachers and leaders want to understand where youth are at in their development so that they can better refine the activities and curriculum provided to the students. Program evaluation helps secure better funding and resources as well.

Cooperators and Co-Sponsors

- Lakeside School District

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