

# impact

University of Idaho Extension programs that are making a difference in Idaho.

## Science knowledge and skills found in Gooding County 4-H outreach

### AT A GLANCE

Twenty-one percent of future jobs will be science based. In response, UI Extension created a 4-H curriculum and other science enrichment youth activities for the community in Gooding County.

### The Situation

The Bureau of Labor Statistics shows that current employment in all Science, Technology, Engineering and Mathematics (STEM) occupations is 13% of the total national employment. STEM Jobs are expected to show exceptional growth, with projections showing an 8% increase by 2029. Employees in science careers need to have science knowledge and skills. Careers in the STEM fields play an essential role in both Idaho and the U.S. economy's growth and stability. Furthermore, the UI Extension, Gooding County's advisory committee has expressed the need to have more outreach programs that partner with the local schools and libraries. Because of these needs, UI Extension, Gooding County created a position for a community STEM coordinator to develop, coordinate and conduct programs along with providing a summer intern.

### Our Response

UI Extension, Gooding County faculty and staff created, established and conducted education efforts for enrichment programs within schools, communities and STEM family events, drop-in programs and clubs. Science-based 4-H curriculum and other youth science programs were reviewed, selected and purchased to



STEM Student enjoying what she is learning during Summer Day Camp science project. Photo credit Jenni Hamilton.

conduct these activities. Hands-on activities were focused on group challenges to boost student creativity and inspiration in exploring the world around them, while enhancing physical and mental well-being. Teachers in the county's six school districts were approached about establishing and conducting school enrichment efforts and STEM clubs. Librarians and community volunteers were contacted about hosting community and family STEM activities and drop-in STEM projects. University of Idaho Extension, Gooding County staff applied for and received an \$80,000 grant through the Idaho Department of Health and Welfare American Rescue Plan Act of 2021 (ARPA) grant funds and \$6,800 UI Extension intern grant. Projects conducted for the countywide STEM programs were:

School Enrichment — The STEM coordinator along with adult and youth volunteers provided opportunities for school students to teach and practice hands-on science skills. These enrichment activities took on many different forms.

- In-school — Regular classroom enrichment projects were conducted in nine classrooms at five schools where lessons on a variety of topics from astronomy to circuitry to geology and robotics were taught.
- Afterschool — 15 weekly lessons and projects were conducted at one school for grades kindergarten to 2nd and 3rd to 5th, alternating between groups every week.
- Summer School — Four weekly lessons and projects were conducted at one school for grades kindergarten to 8th. Topics taught included coding, physical science, entomology and gardening.
- Science Exploration and Fair — Five-week scientific method projects were conducted in seven classrooms, within four schools, with a science fair display and evaluation. The focus was on the 4th grade classes and elementary aged students at the Idaho School for the Deaf and Blind (ISDB).

Community and Family STEM Events — Monthly activities were conducted throughout the county including a Pumpkin Bash, star parties, monthly Art Days and Chain Reaction Challenge. These events provided the opportunity for families to engage in science together.

Summer Day Camps — Youth aged five to 18 were offered a range of topics covering art, space, outdoor exploration and STEM. These weekly two-hour classes provided youth the opportunity to stay ahead of the summer learning loss with fun, hands-on activities designed around 4-H curriculum.

### FOR MORE INFORMATION

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## Program Outcomes

School Enrichment — Total of 622 youth contacts in 17 classrooms located within five schools:

- In-school — Five schools, 17 classrooms, participated in 108 teaching sessions for a total of 80+ contact hours.
- Afterschool — 52 students participated in 15 weeks of STEM programming.
- Summer School — Four weeks, seven sessions per week, nine grades (123 students).
- Science Exploration and Fair — Six schools including two Jr/Sr high schools (83 students), four elementary schools (150 students), and 100% of ISDB's blind and visually impaired students. All schools received invitations with 67% participating in the science fair; a 400% increase in the number of schools participating from the previous year. Students (233) participated in the 3rd Annual Gooding County Science Fair; a 423% increase from 2021 in the number of students who participated.

Community and Family STEM Events — 53 activities were conducted throughout the county where 554 youth and adults came together to grow their knowledge, some as families.

Summer Day Camps — Resulted in 56 youth participating in six different camps over a seven-week period, offering a total of 64 hours of contact and hands-on learning opportunities.

## Cooperators and Co-Sponsors

Gooding County School Districts of: Gooding, Hagerman, Wendell, North Valley Academy and Idaho Educational Services for the Deaf and Blind, Gooding Library District, Wendell Public Library and Hagerman Public Library, Wood River and Gooding Soil Conservation Districts, Magic Valley Astronomy Society and Children's Museum.