



beyond

COWS & COOKING



NEVADA'S 4-H CLUBS EXPAND TO TEACH HIGH-TECH GADGETRY AND PHYSICS — BUT YOUNG PEOPLE STILL RAISE CALVES AND MAKE PIES, TOO
• STORY BY DEIDRE PIKE '98, '02M.A.

When Fallon teens first flip on the gizmo — a Garmin eTrex Vista GPS unit—they often compete to see who can connect to the most satellites. • “They’ll shout across the lot at each other: ‘I’ve got four satellites! I’ve got five!’” says Pam Powell, Churchill County Cooperative Extension educator. “We tell them to stand still and wait for it to hook up. It’s really hard for them not to run over to the place where someone else has more.”

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92 years of 4-H history

Cooperative Extension was founded nationally in 1914 as part of the federal Smith-Lever Act. In Nevada that year, its first employee, Norma Davis, was hired to give home demonstrations and supervise 4-H club work. The first State Fair was held in Fallon in 1914.

During World War I, enrollment dipped slightly, but 4-H Club Achievement Days were still held in Reno. Members displayed their clothing projects on lines between trees. Then, war saving stamps were awarded as prizes.



1900



1920

By 1916, the present emblem, the 4-H clover, was well-known. Boys and girls between the ages of 10 and 20 were growing crops, raising livestock or poultry, making clothes, canning, keeping records and entering their projects for awards.

1940

In 1923, the first State 4-H Club Camp was held at the University's livestock farm south of Reno. Five years later, the first Junior Livestock Show was held near San Francisco, with Nevada beef as part of that event.

The young people crisscross the Churchill County Fairgrounds, learning to use hand-held Global Positioning System units. Then they make high-tech maps with Geographic Information System software.

No, this isn't the annual Bill Gates Jr.

Geek-Out Festival. It's a new 4-H club geared to geospatial technology.

That's right — 4-H club. The Churchill County Technology Team represents the contemporary face of Nevada 4-H, a University of Nevada Cooperative Extension program more historically linked,

perhaps, with state fair pie-baking contests and the raising of goats.

In Fallon, the 4-H Technology Team members go on GPS scavenger hunts — using the unit to locate geographic coordinates and record what they find there. They also “lay tracks,” logging their paths on the GPS units.

“These kids are coming from a digital generation,” says Carol Benesh, Nevada 4-H youth development specialist. “They're ready and set to go with this. They love to play with gadgets.”

The teens put newfound skills to work developing emergency management tools for the community. This summer, they plan to use GPS units to record locations of fire hydrants in Churchill County. They'll log locations and note physical surroundings, combining this info with water flow statistics to create a layered GIS map.

“We can map fire hydrants to create a digital rendition of where resources will be for fire fighters,” Powell says. “Sometimes there'll be a fire hydrant put inside a fence. By looking at a digital map, we'll know where a fire hydrant is — and if there are any blocks to access.”

That may sound complex. But 4-H leaders are confident teens can not only manage these skills — they can help adults catch on.

“A lot of the kids are way ahead of where we are — they teach us,” Powell says. “These kids live tech every day. They're taking that interest and doing some amazing things.”

Adult-youth partnerships. Learning new skills. Helping the community. These ideas are nothing new for 4-H. They've long been part of the club's mission: “To make the best better.”

Cooperative Extension, 4-H's umbrella organization, was founded as part of the U.S. Smith-Lever Act in 1914. That year saw the

start of the first 4-H club in Nevada and the first Nevada State Fair held in Fallon.

An early 4-H goal was to bring cutting-edge agricultural technologies to rural agrarian communities. When adults sometimes resisted change, 4-H leaders taught children new ways to farm. The success was contagious.

“The youth did demonstrations, showing these methods worked,” Benesh explains. “Then adults adopted the ideas.”

The program's start was slowed by World War I, though 4-H Achievement Days were held in Reno during this time with war saving stamps awarded as prizes. The 1920s saw the advent of Nevada's 4-H camps and Junior Livestock shows. During World War II, 4-H club members helped war efforts by collecting salvaged metal. One club reportedly gathered enough scrap to build four tanks for U.S. Forces.

Nowadays, about 50,000 young Nevadans participate in clubs and after-school programs. Traditional “cows and cookies” 4-H clubs still thrive in some areas. In Fallon, young people might raise animals, garden, sew, learn food preservation techniques — and use high-tech GPS units. Operation Military Kids offers training and programs for young people at military bases like Nellis AFB. Other 4-H programs include Collegiate

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Photos Courtesy of University of Nevada Cooperative Extension

In 1938 with the help of Mr. and Mrs. William Rabe of Gardnerville and the Nevada Farm Bureau, a permanent state 4-H Camp was established at Lake Tahoe. One year later, the first annual Nevada Junior Livestock Show was held in Reno.



In the post-war era, 4-H clubs flourished, maintaining many of the original agriculture projects, but also adding projects of interest to many of our urban youth. Today, nearly 50,000 young people each year in Nevada learn life skills in clubs, schools and after-school programs.

1960

During World War II, 4-H club members joined the salvage campaign to help the war efforts. One club brought in enough scrap iron in its drive to build four tanks for the armed forces.



1980

4-H, Junior Master Gardeners and Health Rocks nutrition program, to name a few.

Benesh pushed for technology-oriented programs in the Idaho 4-H clubs before moving to Nevada two years ago. She has a doctorate in education from the University of Missouri and values the benefits of hands-on experience in learning.

"These kids play with these things and they love it," Benesh says. "They don't consider it work. It's wonderful."

A dozen elementary-age pupils line up to recite the 4-H pledge, printed on a large banner.

"Ready, Brandon?"

A freckled second-grader in a camouflage T-shirt nods.

"I pledge my head to clearer thinking ..."

The kids put their hands on their heads for this line.

"I pledge my heart to greater loyalty ..."

They put hands on chests.

At Grace Warner Elementary in Reno, students see 4-H as a reward for completing homework. The 4-H clubs, working in collaboration with the 21st Century Community Learning Center, meet after school four days a week for science and junior leadership instruction at several local elementary schools.

Today, mirrors and flashlights are placed on low round tables in a Grace Warner classroom. Students jockey for chairs in front of these tools.

The kids are working through a 4-H curriculum unit called "Lights and Lighting." Leading this hands-on exercise are two University students and a half-dozen youth leaders, fifth- and sixth-graders trained to help.

"Today, we're going to learn about light being reflected," says Jennifer Spindler, a Nevada senior psychology major. "Who knows what kinds of things reflect light?"

"A shadow?" one young boy offers.

"Well, a shadow blocks the light, right?"

Spindler says, patiently. "Remember we learned that light always travels in a straight line? What reflects light?"

"A mirror?" one girl says, looking at one on the table.

"That's right, mirrors reflect light."

"A watch?"

"Sometimes metal and glass — like in a watch — reflect light."

"I had a toy laser," says Jesus Martinez, 7. "It went up to the ceiling."



Photo by Jean Dixon

Michael Lafferty readies a rocket for launching as Miroslav Gorgiev stands back during a 4H after-school program at Vaughn Middle School in Reno.

2007

The experiment requires two kids working together on the carpeted floor in a dimly lit room. One holds a mirror upright on a paper printed with a

mirror "maze." The other shines the light at the mirror from various angles. The young people draw the lines of reflection on the paper to complete the maze.

Martinez shines a flashlight. Holding a mirror is Paloma Palomares, 8, whose hair is pulled back into a neat ponytail. The light held by Martinez glints off Palomares' gold hoop earrings.

Metal reflects light.

Though science isn't her favorite subject, Palomares enjoys the experiments. Her favorite activity involved filling water balloons.

What might she be doing if she weren't in 4-H?

She considers this.

"Watching TV," she says.

Paloma's big sister, Jennifer Palomares, 12, is a youth 4-H leader in training. She quietly watches another pair of pupils problem-solve. She offers advice but doesn't do the maze for

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them. Palomares explains: “We want to help the kids understand reflection.”

The idea is to make science as fun as possible, Spindler says. They’ve worked through units like nutrition, where kids learned to examine nutrition information on packaged products.

“One day after that, I watched the kids sit down with snacks and they were reading the labels,” Spindler says. “That was really cool.”

During a unit on “Heat and Heating,” the kids were testing the temperature of water. When a thermometer was placed in too-hot water, it broke.

“Now they want to know, ‘When are we going to blow something up again?’” Spindler says.

These kids are eager to learn, Spindler says. The 4-H Clubs meet that need. “We’re not just out there raising pigs and cows.”

For young people who spend months raising a goat or hog, it’s a big moment: the Nevada Junior Livestock Show at Reno’s Livestock Event Center.

It’s a Saturday morning in May and the 4-H clubbers prepare to show their animals. Young people, wearing pressed denim, starched white shirts and green 4-H ties, line up to show shorn lambs.

Suddenly one animal breaks loose from the line. A young girl sheepishly gives chase, kicking up fresh wood shavings.

“There goes her showmanship score,” says JoAnn Elston ’56 (home economics), an event record-keeper who’s watching from the gazebo in mid-ring. Elston, 73, has been involved with 4-H since her youth in Carson City. Her son and daughter were involved in 4-H, as were her three grandchildren. She’s impressed with changes in 4-H over the years. The program evolves to teach new life skills to new generations — yet never loses touch with its roots.

Raising animals teaches young people responsibility, showmanship and camaraderie, Elston says. It prepares them for life.

Since animals raised by kids are sold the last day of the show, some junior club members find the event traumatic. As they mature, young people begin to appreciate earning a profit.



Photo by Jean Dixon

JoAnn Elston has been involved with 4-H since her youth in Carson City. Her son and daughter were involved in 4-H, as were her three grandchildren.

Elston, a Nevada alumna whose children and grandchildren all attended her alma mater, recalls her daughter’s first experience with livestock separation anxiety at age 9.

“She came running to me in tears and said, ‘Make Daddy buy Pablo back,’” Elston says. “I said, ‘You just earned \$900 — that’s one semester at Nevada.’”

In decades past, the 4-H cloverleaf emblem was as recognizable as the Nike swoosh is today.

Times have changed, Benesh says. During a recent branding study, people were asked to rate how they felt about clubs like Scouts, Big Brothers and Sisters and 4-H.

“When it came to 4-H, people may not have known what youth activities and training are part of 4-H,” Benesh says, “even though the 4-H clover is a well-known logo. We do need to take the time to share information on the good work we do.”

At Vaughn Middle School in Reno, the 4-H rocketry club meets Wednesdays after school.

“What does 4-H stand for anyway?” asks Michael Lafferty, 14. He and Simrri Medina,

14, sit at a cafeteria table, designing a catapult out of plastic straws, Popsicle sticks and rubber bands. When done, the eighth-graders will launch marshmallows across the room.

Emily Donaldson, who graduated from the University in December 2006 with a biology degree, doesn’t answer their question directly. “What do you think 4-H stands for?” she asks. “Health? Humor?” Lafferty suggests.

“Hypnotic,” Medina adds.

The teen boys seem absorbed by their task.

“We’re learning about the laws of motion,” Medina explains. “Everything we do here has to do with science.”

“I’m like Bill Nye the Science Guy,” Lafferty says, joking. “It’s fun. We got to roll soup cans down a ramp and clock the speed of soup.”

“Chicken broth,” Medina clarifies.

The rolling-soup-can experiment demonstrated Newton’s Second Law of Motion: Momentum is the product of mass and velocity.

The boys take turns going outdoors to spray paint rockets built from kits. Lafferty will attend Wooster High next year, where he plans to work on an Advanced Placement diploma. He says he’d like to attend the Massachusetts Institute of Technology.

Donaldson approves.

“I like these guys,” Donaldson says. “I love science and always have — and I want to pass that along.”

She was disappointed that no girls signed up for the rocketry club. A few girls show up during the club to watch Lafferty, Medina and the others at work.

“Michael, let’s go do something,” one girl pleads with Lafferty.

“I’m doing this now,” he replies. “We’ll do something when I’m done.”

Back inside, the boys complete their catapult and test it by launching paper clips.

Donaldson explains what 4-H stands for: “Head, heart, hands, health.”

“What does that have to do with this class?” Lafferty asks, off-handedly. He’s perhaps more interested in another question. “Remember when we used magnets to make the cans spin? Do you think you could use that kind of energy to power a car?” 