OUTDOOR FITNESS CHALLENGE LEADS 4-HERS TO A GRAND CANYON ADVENTURE!

...Read more on p. 7
Do you want to make a difference in the lives of Arizona youth?

More than 130,000 youth participate in Arizona 4-H and Extension’s other youth development programs every year. Through their involvement, youth develop critical thinking skills, leadership, technical know-how and social skills through a wide variety of statewide, county and club activities.

Arizona 4-H is a national leader in positive youth development. After celebrating our centennial in 2013, we have continued to press forward for another exemplary 100 years. For example:

**Best STEM Afterschool Program**

Arizona 4-H was voted the best STEM afterschool program in the state during the Cox Communications “Connect2STEM” Awards program. You can see a video about the reasons for our award on the Arizona 4-H website.

**National Youth Science Day**

Arizona 4-H, in collaboration with many other partners both on and off campus, won the national competition to design the 2014 National Youth Science Day Experiment, “Rockets to the Rescue,” which was replicated all over the nation and in many parts of the world on October 8. Read more on page 2.

**State 4-H Camp**

Our state 4-H camp on Mingus Mountain near Prescott continues to offer opportunities for environmental and camping education. We are pleased to have hired a new camp director, Adam Yarnes, who brings a wealth of experience in managing and directing outdoor camp facilities and programs. We also received another UA Green Fund Grant to make improvements to the camp. We’ve installed a new composting toilet, a new ice machine and a commercial dishwasher to make sure those dishes get squeaky clean. In February and March, another AmeriCorps*NCCC team helped make further enhancements to the camp.

**Collaborating with Mexico**

Arizona 4-H has been enlisted in an effort to develop a 4-H program in Mexico in collaboration with 19 universities there. By developing agricultural and STEM-based programs, the hope is to develop viable workforce opportunities for youth in rural areas. Read more on page 8.

**Scholarships**

The Arizona 4-H Foundation awarded 32 scholarships this year for a total of $41,800.

**YOU CAN MAKE THE BEST BETTER**

Arizona 4-H is “making the best better.” Check out the stories in this publication about how our members and volunteer leaders are taking 4-H to new heights. But we also need your help. You are invited to make a difference by supporting the Arizona 4-H Youth Foundation.

This year, you can:

- **Volunteer!** The Arizona 4-H Youth Foundation is currently seeking applicants for the Board of Trustees. These are opportunities to share your professional experience and to connect 4-H youth with resources in our communities.
- **Donate!** Since 1970, the Foundation has raised significant donations for 4-H youth. The Foundation is currently working on funds for the James 4-H Camp at Mingus Springs, scholarships to college-bound 4-H members, as well as funding travel awards to National 4-H Congress and Western National Roundup. In addition, we support state and local activities such as 4-H shooting sports, 4-H leadership conferences, collegiate 4-H, and an international 4-H exchange program with Japan.

We invite you to support the vital Arizona 4-H mission as every volunteer and donor contribution – no matter the size or frequency – are welcome and appreciated.

To get more information on volunteering or donating, please contact the Arizona 4-H Youth Foundation office at 520-621-7211 or az4hyf@cals.arizona.edu.

Sincerely,

Arizona 4-H Youth Foundation
Board of Trustees

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Some ideas just take off on a trajectory. That’s certainly the case with the Rockets to the Rescue experiment created by University of Arizona 4-H Youth Development in collaboration with campus and community partners. The innovative concept won the 2014 National 4-H Youth Science Day competition and a $20,000 prize.

By the time Science Day arrived on Oct. 8, more than 900 Rockets to the Rescue events were registered in the United States, Italy and the United Kingdom. Teams of youth were challenged to design, test and launch rockets that could deliver high-energy food to a fictitious island of starving people across the ocean.

The set up was this: Imagine that people are starving on an isolated Pacific atoll and NASA has asked youth to build a rocket that can be launched from the mainland, travel over the ocean and deliver food to the islanders. The fictional island was called Ceres, named for the Roman goddess of agriculture.

“We let the kids find the answers themselves,” said Eric Larsen, a Pima County 4-H Youth Development agent at the UA. “We’re asking them ‘what do you think is the right way?’”

Working in teams, the youth used trajectory physics to plot launch angles. They researched the nutrition content of high-energy foods to find the most nutrient-dense yet lowest-cost option that would survive the trip intact. They built lightweight aerodynamic rockets with simple materials – including PVC pipe for a launcher, plus paper, tape, string, cotton balls, plastic bags and other assorted materials for the rocket and the payload – a food transportation device known as FTD. Then they launched the rocket toward a target 30 feet away. Next they recovered the rocket and altered the design to make it more effective, changing one variable at a time. After a few rounds of experimentation, nearly every team was hitting the target.

“This truly is inquiry-based learning,” said Kirk Astroth, director of 4-H Youth Development in Arizona. “Not telling the kids what to do stimulates creativity.”

The experiment was based on a real-life food security issue from November 2013. At that time, Typhoon Haiyan struck the Philippines, virtually isolating six of the islands from foreign aid. “Most of the large boats were too far away, planes couldn’t land because the runways were torn up and helicopters can’t fly long distances,” Kirk said. “It became an all-too-real food security issue.”

4-H National Youth Science Day is an annual endeavor to encourage kids to develop an interest in STEM fields – science, technology, engineering and math.

The Rockets to the Rescue project is so engaging for the kids – yet so low cost and simple to present – that 4-H leaders, YMCA groups and teachers across the nation continue to use it today.

The interest has grown exponentially. Kirk, Eric, Bryan Chadd, Stacy DeVoe, Kim Gressley, Mary Jo Moncheski and Curt Peters – all 4-H faculty with the UA Cooperative Extension – have traveled widely to make presentations about this high-impact project.

It began when the National 4-H Council sought proposals involving aerospace engineering for the 2014 Science Day. The UA has a highly regarded aerospace program and has long partnered with NASA. Tucson also is home of Raytheon Missile Systems. Kirk thought they should team up to develop a proposal.

“We let the kids find the answers themselves.”

The project quickly grew into a cross-campus, cross-community collaboration – expanding from Arizona 4-H to include the UA Department of Nutritional Sciences, the UA STEM Learning Center, Flandrau Science Center & Planetarium and faculty in the College of Engineering and College of Education – as well as Raytheon, Northern Arizona University’s Center for Science Teaching and Learning and the Arizona Center for Afterschool Excellence.

Aerospace experiment proposals from 4-H programs around the country were judged by members of the National 4-H Council and a review team that included scientists and engineers from NASA and other industry partners such as AutoDesk and Lockheed-Martin.

“This is much bigger than any of our previous experiments,” Kirk said. “It really grabs kids’ imaginations.”
Out of This World Opportunity

4-H Youth to Talk to Astronauts in Space | Pima County

This summer 4-H youth in Tucson will ring up the astronauts orbiting the Earth on the International Space Station. Talk about a long-distance call…

This is a rare opportunity. There are only 12 finalists in the nation selected by NASA to talk live with the space station crew this year.

“It’s really exciting. We are going to make contact with the International Space Station,” said Lani Dzicek, leader of the only 4-H Ham Radio project in Arizona.

The 4-H group of six learned it was a finalist in late April and began making big plans for the day of the contact – beyond the live 9- to 12-minute connection with the space station crew.

“My plan is to invite Mark Kelly – because his twin brother is on the expedition,” Lani said. She envisions an event like a science fair that includes guest speakers, exhibits and lots of attendees who want to learn more about 4-H, ham radio and space travel. The exact date will be announced about 10 days before the call is scheduled.

There is a precise window of opportunity for the 4-H youth to contact the six-member crew. The space station travels at the rate of 17,500 miles per hour and circles the Earth every 90 minutes. “The passover is so short – 9 to 12 minutes,” Lani said.

“We decided as a group to invite members of the local rocketry and robotics 4-H clubs to join us in asking the questions. So we’ll have a total of 12 involved.” NASA’s Amateur Radio on the International Space Station program requires finalists to submit questions for the astronauts and cosmonauts in advance.

“We also hope to set up a live streaming of the event so 4-H members all across the nation can see and hear our interaction with the International Space Station,” Lani said.

It’s a big project. Community partners include Tucson Electric Power, Pima Air and Space Museum, the Tucson Fire Department and the Vail School District – where the event will take place.

“We wanted to do this to support the kids’ interest in STEM-related activities – science, technology, engineering and math.

“Because we’re not a school or organization, we had to find a facility to host us. We visited Empire High School – walking around, taking measurements and doing calculations for the equipment. We’re going to be on the stage of the school’s gorgeous theatre.”

The technical team includes Larry Brown, a retired Raytheon engineer who helped a local school contact the space station a few years ago, and Mathias Gibbons, a computer sciences graduate student at the University of Arizona and president of the UA Ham Radio Club.

NASA astronaut Scott Kelly and Russian cosmonaut Mikhail Kornienko will be the first to live and work in space for an entire year – more than double the length of a typical mission. They will travel 143,640,000 miles. The distance from Earth to Mars is 140,000,000 miles.

The idea is to learn how such a long stay in space impacts humans. Scientists will compare Scott’s condition before, during and after the mission to that of his identical twin Mark, a retired astronaut who lives in Tucson with his wife, former Congresswoman Gabrielle Giffords.

The crew launched March 27. Other members are NASA astronaut and mission commander Terry Virts, Russian cosmonauts Anton Shkaplerov and Gennady Padalka, and Italian astronaut Samantha Cristoforetti, the only woman on board.

Lani anticipates that all six of her 4-Hers will have their ham radio licenses before they contact the space station. They’ve also built antennas and a transceiver, a unit that transmits and receives signals. “The two girls in our group made that,” Lani said.

This phenomenal opportunity to talk to astronauts in space came because Lani’s daughter Jerico wanted to get her ham radio license. Both her parents are ham radio operators.

Jerico, 14, is president of the Vail Vaqueros 4-H club. She asked her mom to lead a ham radio group so she could learn with her friends. They got very excited when they heard that ham radios can connect with the space station – and they really wanted that opportunity.

“We just made it happen for the kids,” Lani said.

NOTE: This 4-H report went to press before the 4-H Ham Radio group connected with the International Space Station event this summer.

DID YOU KNOW?

- The ISS was built by five space agencies that represent 15 nations
- The space station orbits the Earth every 90 minutes
- It travels 5 miles per second, or 17,500 miles per hour
- The station is the size of two Boeing 747 jetliners
- It has been continuously occupied since November, 2000

Pictured: L-R: NASA astronaut Scott Kelly and Russian cosmonaut Mikhail Kornienko
Volunteers Take On 4-H Horse Show
Statewide

There is a lot more to producing the Arizona 4-H Horse Show than meets the eye.

In previous years the event was part of the Arizona State Fair. This year it was produced entirely by 4-H Youth Development volunteers who wanted to make it bigger and better.

The horse show to-do list is daunting. You need livestock for roping – and feed. You need space to park horse trailers and RVs. You need judges. Sponsors to help defray costs. Registration packets. Programs and posters. Ribbons and buckles. And much more.

“We wanted to create an experience that all 4-Hers in the state of Arizona could participate in – not just advanced riders who qualify to compete,” said Kerry Officer, a Pinal County 4-H leader and president of the horse show advisory board. “We had great aspirations.”

In addition to the 127 riders competing in more than 40 categories, there were close to 50 4-H youth from around the state who entered the contests.

“We had a poster contest, a photography contest, an art contest, a grooming squad contest. We put on a dinner and a dance. We had our first printed program – featuring the winning art designs on the front and back covers – and a commemorative T-shirt.”

More than 100 4-H leaders, parents, youth members and community volunteers joined forces to produce the horse show. “We started with no funds, no facility and only a few people to pull off a 3-day statewide show,” Kerry said.

“We made it our own,” said Myrna Flores of Maricopa County, a longtime 4-H leader and vice president of the horse show advisory board.

“We took it up a level. We had a leadership committee involved with every step. There was a lot of camaraderie. It brought the kids together. It brought the counties together. Everybody chipped in and helped.

“We had a dance for the kids for the first time. They completely enjoyed it. It was really a big deal. The dance brought everyone together. They were all out there doing the line dance and talking to each other and having a great time,” Myrna said.

Fortunately, the advisory board – including treasurer Linda Sloan-Compton of Pinal County and secretary Nola Cardani of Coconino County – and many committee members knew the ropes from being involved in their own county fairs and horse shows.

“We planned for months and were putting in 20 hours in the weeks leading up to the show and 12-hour days at the show. We all wore multiple hats,” Kerry said.

Myrna said, “We had tremendous support and guidance” from Kirk Astroth, director of 4-H Youth Development at the University of Arizona, and Bryan Chadd, associate 4-H agent in Maricopa County.

The event was held in November at the Queen Creek Horseshoe Park and Equestrian Centre, which is the home arena for the Maricopa County 4-H program.

“Horseshoe Park was amazing. They have several arenas, cattle roping shoots, ranch sorting rings. And we were able to have the whole facility,” Kerry said. “The families that came long distances could park their RVs and camp right next to the barns. We had an indoor arena, which we’ve not had before. We did English and ranch sorting one day, Western another day, then roping and gymkhana.

“We pulled in judges from all over the state. We contacted families and friends with livestock and picked up cattle all across the Valley. People were very flexible. The community really stepped up to support us. It was very inspiring.”

And next year promises to be even better, Kerry said. “The show will continue to evolve. Our goal is to make it better.” Myrna added, “We can surpass what we did.”

Above: Flag carriers herald the beginning of the Arizona 4-H Horse Show. From left: Sydnee Rush from Pima County; Cheyenne McQuade, Dakota Flores, Maaiken Kimball and Cooper McQuade from Maricopa County.
Maggie Gonzalez decided in high school she wanted to become a teacher and give back to her hometown community of Nogales. She was inspired by her elementary music teacher and by her experience tutoring kids in the Boys and Girls Club.

Now a junior in college, she’s been working hard and paying her own way. She went to her advisor to inquire about financial aid – and instead discovered the AmeriCorps program with the local Cooperative Extension office.

Maggie ended up working with the 4-H Youth Development program in Santa Cruz County, gaining leadership and teaching skills while receiving a modest living stipend, plus an educational stipend to help fund her senior year.

She spends much of her time with high school and middle school students who are 4-H Healthy Living Ambassadors. They were trained at Tucson Village Farm and in classroom sessions to teach their peers six lessons about making healthier food and drink choices. Maggie helps schedule and coordinate their presentations in schools and the community in Nogales, Rio Rico, Elgin, Patagonia and Sonoita.

“What am I learning? Oh where to start?” she said. “I’ve gained leadership skills that will help me greatly in developing my teaching career.”

She’s amazed at how the 4-H ambassadors have blossomed in just a few weeks. “They usually started out a little nervous. They’re not used to talking to people in a public way. So I would tell them, ‘I was like that too. It takes practice. You’ll get better at it every time.’ I shared with them that I also am an English language learner. At first they didn’t know I could speak Spanish.”

One of the 4-H ambassadors told her, “I would never have imagined presenting and teaching others.”

Maggie said, “These ambassadors are driven – and their enthusiasm is contagious.

Many already understood the importance of healthy living – but they demonstrated their desire to teach others and share that knowledge.”

She finds them inspiring. She even volunteers with them at their school. “I told them that I didn’t know anything about gardening. They’re going to teach me.”

The 4-H Healthy Living Ambassador program in Santa Cruz County is supported by a grant from the Walmart Foundation and United Healthcare. “Nogales was asked to join because our population is about 90 percent Latino,” said University of Arizona Cooperative Extension Agent Amanda Zamudio.

“We see the effects of diabetes – it’s in our genetics. The Healthy Living program can have a positive impact. Mexicans are generational. We share meals. The youth are sharing these messages with their families – like the increased risk from drinking sugary sodas instead of water.”

The ambassadors share what they’ve learned about powering the day with healthy breakfast choices, avoiding unhealthy fats in fast food, choosing more fruits and vegetables, eating more whole grains and reading nutrition labels.

Maggie said, “I actually have asthma so I started changing my habits way before this – but I was not doing a good job. Working with this program serves as a good reminder to drink more water, and incorporate less meat. I’m a meat eater. It’s a family thing – eating meat, especially in Mexican food. I do think I’ve bettered myself. Before this I did not do a good job on my own.

“I told my mom about the healthy snacks. One of them is banana burritos. You take a whole-wheat tortilla, spread some strawberry cream cheese, slice half banana on it and add granola, plus raisins if you like, and cinnamon. Wrap it up as a burrito and have it whole – or slice it in little rolls for a snack like an appetizer. That’s the one I really enjoy doing and the process of making it.”

Maggie is studying elementary education at UA South. “Now that I’m working with middle and high school youth I’m enjoying it a lot and may go on to get my master’s degree in secondary education. I’d love to teach English or science.”

Amanda said, “This program is a great opportunity for Maggie to see different types of non-traditional education styles.”

Maggie agreed. “It’s nice to get some hands-on experiential learning. It’s very beneficial.”

She’s shared her experience with others. At least two fellow students are likely to look into various AmeriCorps programs.

Founded in 1994, AmeriCorps engages more than 75,000 Americans in intensive service each year at nonprofits, schools, public agencies and community and faith-based groups across the nation.

Above: Americorps future teacher Maggie Gonzalez rides a blender bike to emphasize the importance of fitness and nutrition.
For the last several years, Apache County 4-H agent Mike Hauser has been leading groups of youth into the Grand Canyon as a reward trip for pledging to stay fit and healthy. This year, nearly 100 youth and adults made the trip, joined by 41 teens from Southern Arizona who were part of a Walmart Foundation grant to encourage healthy lifestyles.

The teens from Southern Arizona who took up the get-fit challenge and earned a trip to hike the Grand Canyon found the experience to be “awesome,” “beautiful,” “amazing” and yes, “challenging.”

On March 1, youth in four Southern Arizona counties started walking, running and hiking to get in shape—with the promise of a three-day adventure to Grand Canyon National Park.

By April 11 they had to pass a training test – hike more than five miles up to 9,453-foot Mount Wrightson in the Santa Rita Mountains southeast of Tucson.

On April 24 they traveled to the south rim of the Grand Canyon and camped as the temperature dropped to 28 degrees. Early the next morning they headed into the canyon.

Half of them went down the steep Kaibab Trail all the way to the Colorado River, then up the Bright Angel Trail, a total distance of 16.3 miles.

The others hiked either 12 miles roundtrip to Plateau Point, where they could look down on the river, or nine miles roundtrip to the green oasis of Indian Garden.

“It was just fabulous. They were great troopers. They all met their goals,” said Natalie Shepp, program coordinator for 4-H Healthy Living Ambassadors at the University of Arizona. “I was surprised at the level of interest. This was a much larger group than we ever anticipated.

“It really helped that we did weekly training hikes – to Pima Canyon, ‘A’ Mountain, Tumamoc Hill, Blackett’s Ridge in Sabino Canyon and Mount Wrightson.” Some kids also got their parents, siblings and cousins involved, taking walks together.

Natalie has worked for five years with the Healthy Living program, first as a volunteer and now on staff. She’s seen hundreds of 4-H youth learn how to choose healthier food and drink, then teach their peers. But she’s not had as much success getting kids to be more active.

Until this year—when she had the idea for a fitness challenge. Her partnership with seasoned guide Mike Hauser and the Walmart Foundation funding created a recipe for success.

“Mike actually made all the food for our group – and his own 4-H hikers,” Natalie said.

As a part of the Walmart Foundation grant, the group was charged with holding a statewide teen summit. What better way to hold a summit than by descending with other teens into the depths of the Grand Canyon? Game on!

Many of these kids had never hiked before. Some had never traveled out of their small hometowns in Southern Arizona. “This challenged them mentally and it challenged them physically,” she said. “They formed a tight bond.”

She said they had to scramble to find enough sleeping bags and backpacks to outfit the teens and arrange transportation for such a large group. “We had a lot of community support.”

This grand adventure had a profound impact. Here’s what the hikers had to say afterward:

“Now I want to try to hike all the national parks and become a park ranger.”

“I learned that I am not a quitter.”

“Determination is what you need the most – after water.”

“I want to hike more mountains.”

“You can push yourself to do things you thought you couldn’t do.”

“You may struggle – but you’ll finish.”

“The beauty kept me going.”

“I realized I don’t need technology.”

“I love this Earth so much.”

“Wow – hiking is for me. I felt alive. A thrill. A rush!”

“I kept a positive attitude all the way back up.”

“It’s better to enjoy than to be rushed.”

“I would go on every hike they invited me to – no matter where.”

“Believe in yourself.”

“Anything is possible.”

Above: Hikers take in the scenery at the Indian Gardens overlook.
On Cover: 4-H adventurers at the Grand Canyon overlook.

“‘They were great troopers.’”

Outdoor Fitness Challenge
Universities in Mexico Reach Out to Rural Youth

Universities in Mexico are developing programs to reach out to youth in rural areas and change the future of their country.

That’s why 57 delegates came to the University of Arizona in February – to learn about the UA’s statewide Cooperative Extension model and 4-H Youth Development program.

They returned to Mexico with knowledge – but more than that – hope.

“This is an excellent program. It gives you a broad horizon. You begin to dream… to have ambition… to see a better life,” said Erick “Pablo” Ortiz Flores, a professor from Jalisco.

“If we as a local university can implement a program where kids are touched by universities at a very young age – that will explode our way of thinking and our way of living,” he said.

He was among the delegates from universities representing a total of 19 sites in Mexico. They are part of Project REINU, an initiative of Mexico’s department of agriculture to establish a nationwide university-based Extension and Innovation Network. The goal is to expand to 80 sites throughout Mexico by 2018.

The UA is leading the training, in partnership with New Mexico State University. Both universities have time-tested 4-H and Extension programs dating back a century.

Delegates participated in team building at the 4-H High Ropes Course and toured the quarter-acre Tucson Village Farm as schoolchildren enthusiastically picked fresh produce and learned to prepare it. They traveled to the Maricopa County Agricultural Center, a 2,100-acre research farm operated by the UA Cooperative Extension in the College of Agriculture and Life Sciences.

Rossana Hernandez from Puebla said, “This changes my mind. It’s a different way to see the world. Now in Mexico we are working just with adults. 4-H is for children. We need to teach children. Children are our future.

“I’m very inspired. I actually want to try an urban garden. I also learned about leadership and all the values that a leader needs. I’m really excited to go back to Mexico and teach all the knowledge that I now have. I’m going home to grow something great!”

This training at the UA was the first phase of a cross-border collaboration that could extend for years. In the next phase, leaders from the UA and NMSU will visit the universities in Mexico multiple times to help implement programs.

“This opportunity comes as a result of generations of UA work in Mexico – and a shared vision for deep collaboration in the future,” said Mike Proctor, UA vice president for global initiatives. “Together we can work to empower individuals and communities to find new opportunities for education and economic development.”

“The people we are working with believe passionately in the future of Mexico,” said Kirk Astroth, director of Arizona 4-H Youth Development. He has worked with leaders from Latvia, Lithuania and Nepal to establish youth development programs similar to 4-H.

“In countries like Mexico where there are lots of challenges, young people want to be involved. They want to be part of the solution. They want to design the future. They don’t want to be spectators in democracy. This project can help develop the entrepreneurs, the problem solvers, the inventors, the creators in Mexico so they can develop a viable economy.”

Paul Guiterrez, an extension specialist at NMSU, said “this idea was born out of the reality that a lot of the immigration into the United States was from the impoverished rural communities of Mexico. People were looking for opportunities. If we can help Mexico stabilize the rural communities – give people in rural areas better opportunities – they will stay and build up their communities.”

Ortiz Flores, the professor from Jalisco, said “I have big ambitions. We have an empty lot at our university. We can do an outreach program so people can come to the university and do activities for kids from preschool to high school – at a campus farm. We also can also set up a lab where kids can touch computers and view robots. We have got to reach the next generation. I’m thinking of ways to touch those young kids’ lives. We have a big opportunity.”

Above: Leza Carter encourages Mexican 4-H professionals to sample some kale at Tucson Village Farm.
Practical, Inspiring Visit

Raj Awasthi traveled more than 8,000 miles to Arizona to see firsthand how 4-H Youth Development works and learn how he can grow a similar program in his native Nepal.

Nepal is struggling after a decade of civil war that killed 15,000 people and displaced more than 100,000 people. Of those who died, 86 percent were between the ages of 15 and 35. Years later the remaining youth are faced with an unstable government, few jobs and no security, Lok said. They are leaving Nepal at the rate of 2,000 a day to seek jobs in India, Malaysia, Dubai, Qatar and beyond. And that was before the devastating earthquake on April 25.

The goal of the newly established 4-H Nepal is as lofty as the country’s famed Himalayan mountains – stop the exodus and provide a path to purpose and hope.

“In Nepal there is no mechanism to engage the youth – no government agencies, no community groups. If we want to change society, if we want to give opportunity, there must be young people in the government process. Without youth participation, we cannot do it,” Lok said.

“Our youth do not think about self-employment. They have negativity about agriculture. We can change their mindset through the 4-H campaign. I think it is the right time.”

Lok is president of 4-H Nepal, one of the first 4-H programs in Asia. Over time, 4-H Nepal aims to involve 10,000 youth in 75 districts throughout the country.

Winrock International recently received a US-AID grant to support youth development efforts in six countries – three in Asia and three in Africa – over five years. Nepal is one of those. The National Youth Federation Nepal entered into a collaborative agreement to support expansion of positive youth development efforts in the country.

Winrock officials contacted the University of Arizona College of Agriculture and Life Sciences and that led to Kirk Astroth, director of Arizona 4-H Youth Development, who previously helped leaders from Latvia and Lithuania establish youth programs similar to 4-H in those countries.

Ultimately Kirk was invited to Nepal. “My scope of work was to train 20 youth development professionals in positive youth development concepts – very fundamental work. We met for 8 hours a day for 8 days straight,” Kirk said. That was August of 2014 and when he met Lok.

“We did lots of activities outdoors to help them understand how in 4-H we use hands-on experiential learning to get the kids to engage and participate in active problem solving, which leads to developing teamwork and leadership.”

He shared information about a global 4-H summit scheduled in South Korea in October. “I encouraged them to get invited so they could meet other people from Asia, other countries that have parallels to Nepal, so they could start to build a regional network and not work in isolation.” Three delegates went, including Lok.

In February 2015, Lok traveled to Tucson to spend three weeks learning about Arizona’s 4-H program. He met with 4-H agents and joined a conference for university leaders from Mexico who came to learn how 4-H and Cooperative Extension programs could be adapted to their country’s needs.

As many are aware, on April 25, Nepal was hit by a major earthquake of 7.8 on the Richter scale, followed by a second earthquake (7.3) on May 12. Whole villages were leveled and five UNESCO World Heritage sites were destroyed in Kathmandu. These natural disasters, and now typhoon-driven rains, have deepened the misery in what was already a poor nation. 4-H Nepal’s efforts to build a youth movement have been, understandably, set back, but 4-H Nepal is front and center in relief efforts, building toilets, supplying tarps for temporary shelter, providing health education to minimize disease, distributing supplies and other efforts. Contributions can be made to established international aid agencies such as CARE, Oxfam, Red Cross and others.

Lok learned that 4-H reaches out to kids as young as age 5. In Nepal, they were focusing on youth age 16 or older. “You need to start younger to get kids excited,” Kirk said.

Lok returned to Kathmandu with ideas and plenty of specifics on how to get started. He plans to lead his 4-H Nepal team of seven other elected officers to develop and implement a strategic plan. “We need a positive message. We can do many things in our country and create many opportunities,” Lok said.

A small urban farm is a likely first step. Kirk said a time-tested 4-H method is to start with a highly visible demonstration project in the community – something that attracts young kids and gets them excited.

Lok hopes that could spark interest in farming and science — and potentially bring a new generation back to agriculture.
With smart phones and digital cameras, anyone can take a picture. But is it a good picture? Ask the teens who attended the 4-H Youth Development Media Camp. They now know how to compose and take high-impact pictures, amazing pictures, fantastic pictures. They learned together by exploring nature, taking photos and critiquing them.


Their images are good, then better and finally awesome. “Watching other people’s photos go from okay to fantastic is pretty cool,” said a camper named Vincent.

Emily agreed. “Everybody is astonished from the beginning of the camp to the end because there’s such an improvement.”

The four-day camp is held at the University of Arizona’s Santa Rita Experimental Range about 40 miles south of Tucson in the Coronado National Forest.

Youth from age 13 to 18 arrive at the camp and meet briefly with the 4-H instructors.

Their first assignment is a scavenger hunt for photos. They’re told to head out and “take pictures of big things, little things and really, really small things.”

“The idea is to see where they are at technically and aesthetically – then build on that,” said Eric Larsen, a Pima County 4-H Youth Development agent at the UA. “We give them some ideas and some training in how to use the camera, how to frame a shot. Then we turn them loose. Go take 5 or 10 good photos.

“Each time they go out, they are applying different principles – like the rule of thirds. They apply knowledge that they gained and take the time to get that quality photo. They go on to take some really amazing photos.”

Youth and leaders come together to view, critique and learn – a process that’s repeated each day, building on the previous day’s efforts.

Several campers focused on videography. Renee said, “I learned how crazy it is to make a movie in a day and how much fun you have. I learned how to deal with actors, have a storyboard and make the final product.” Alexia added, “I learned a lot about the different angles when videotaping – and how music affects how you see the video when it’s all put together.”

The last night of camp everyone gathers at the campfire and passes a microphone around to share highlights of their experience:

“I like macro – the detail is so amazing.”

“I picked up a lot of good tips about my photos – especially with Photoshop. That’s an excellent tool. The critiques really helped with the overall quality and composition of my pictures.”

“I’m developing my own voice, my own style. Now through photography I look at things differently. Every time I go somewhere I look around me and notice things that most people wouldn’t notice.”

Five years ago Larsen and three 4-H colleagues attended an in-service video training. “We thought it would be really cool to put together a photo and video camp. So we did some popcorn-style brainstorming – and then we had a camp.” The first was in 2011.

This year the 4-Hers got to see professionals in action. A video crew from Arizona Public Media came to the camp and interviewed them for a six-minute feature on the camp. “The best part was the youth could see how these skills can be utilized in the real world for a possible career,” Larsen said.
“Watching other people’s photos go from okay to fantastic is pretty cool.”

Facing: White flower close up by Chris Farnsworth; Lens and insect by Lena Sanner. Above Left: Flowers on orange background by Anna Steinnecker; Stamens by Chris Groberg; Brass chicken on blue by Jo Avery; Potter’s wheel by Vincent McGurk; Above Right: B&W tree and clouds by Kathy Young; Dragonfly by Jackson Rush.
Kids are shocked when they see that a 20-ounce classic Coke has 17 teaspoons of sugar. That dramatic visual is part of “Rethink Your Drink,” one of six engaging lessons that 4-H Healthy Living Ambassadors are sharing with other middle and high school youth to promote healthier food and drink choices.

The ambassadors add teaspoons of sugar one by one to a clear glass, asking the kids “how much sugar is in your drink? This much? More? How about this?”

Few expect the amount to be so startlingly high.

Partly that’s because sugars on the food labels are listed in grams – and most kids have no idea how much that is. Sixteen grams of sugar equal about 4 teaspoons. That means a typical can of carbonated soda has about nine teaspoons of sugar. And sugars come in many forms – white sugar, brown sugar, honey, high-fructose corn syrup, fruit sugars, plus artificial sweeteners.

It all adds up.

4-H Healthy Living Ambassadors receive training at the Tucson Village Farm operated by the University of Arizona, then spread out to schools, community events and county fairs sharing tips on drinking less sugar, eating breakfast and choosing more fruits, veggies and grains.

You might even see them with a special stationary bicycle that when pedaled burns calories and powers a blender to make a healthy tasting smoothie.

In addition to Rethink Your Drink, lessons they teach peers are:

- **Power Up your Day** – learn what foods are best to fuel your body in the morning
- **Healthier Foods Fast** – know how much fat there is in fast food and the difference between healthy and unhealthy fats
- **Read It Before You Eat It** – learn how to read nutrition labels and what they reveal

Jude Sotelo wrote that the Healthy Ambassador program “changed my life because it helped me drink less sugary drinks and helped me stop eating junky food. Now I get water instead of soda. I also used to eat a lot of chips and candy. Now I eat fruits or veggies instead. This also helped my family eat more homemade food instead of fast food.”

The 4-H Healthy Living Ambassadors program is now active in four Arizona counties – Pima, Santa Cruz, Cochise and Pinal. It’s been growing every year since 2011. The goal is to tackle the epidemic of obesity by promoting healthy eating and active lifestyles among youth and their families. The program is supported in Arizona and eight other states by the National 4-H Council with grants from United Healthcare and now also the Walmart Foundation.

Natalie Shepp is the program coordinator at the UA College of Agriculture and Life Sciences. In 2014 a total of 448 middle and high school students were trained in nutrition, culinary skills, growing food and leadership. One requirement is that once trained the 4-H youth teach their peers with fun, engaging lessons about making healthier choices.

In 2015 the program expanded its reach by encouraging teacher participation, providing continuing education credits to become a certified 4-H Healthy Living Ambassador Educator and receive a $500 stipend.

Little changes can make a big difference. Kids and their families are making healthier choices. They report eating more fruits and vegetables, drinking less sugary drinks, even reading more food labels, Natalie said.

4-H Living Healthy Ambassador Enrique Castillon wrote, “This experience has changed our whole family as a unit. I have taught my parents and sister simple ways to be more healthy, such as by eating less junk food, drinking less sugar, eating more grains. In fact my parents have even lost weight with this simple method. Everyone is happy and thankful. This has truly been a great experience.”

He also noted, “This dramatically impacted my lifestyle. I used to drink an abundance of soda, particularly Coca-Cola. I have significant reduced my Coca-Cola drinking habits. I rarely drink soda anymore.”

“Above: A Healthy Living Ambassador teaches youngsters about nutritious garden foods.”
But “Frankentractor” Needs Work

Pima County

It’s not every day you see a pink tractor.
But you can in Pima County – at tractor pulls, parades, community events and the county fair. The pink tractor pulls a lot of attention.

The Frompton Farmall 400 is the pride of the Northwest Tucson Outriders 4-H tractor club – a very active group of nine who spend every other Sunday afternoon restoring tractors.

“It’s definitely an eye catcher. And breast cancer is the first thing people think of when they see it,” said Rod Stanger, who leads the 4-H group with his wife Bettina. She’s the official leader and he’s the mechanic.

“Our kids are really proud that their tractor helps promote breast cancer awareness.”

The club has restored three tractors over the past seven years and maintains them. They were working on a fourth – but stalled after discovering it had a cracked block.

They went to club sponsor Drew Harrison and looked around at used and vintage tractors in need of restoration.

The Frompton stood out. “We realized it would not take much to get this going. All it needed was a little TLC and a paint job. We have girls in the group and they said ‘let’s do it in pink camo.’” His daughter was one of them.

“We started thinking about it and decided that camouflage might be too much to do. So we decided on two-toned pink.”

Now the 4-H team is tackling a tractor they call “Frankentractor” because it is built from so many different parts.

“The tractor was donated by a nice old gentleman named George O’Day who built it with his sister back in the 1930s,” Rod said. “The rear end is an old International tractor. It has a Willys Jeep transfer case, John Deere and Lincoln Chromer parts, some homemade parts and Willys Knight pedals – which nobody knows about any more. Willys Knight was an old car manufacturer until the 1930s. This is a real frankentractor.”

The budding 4-H mechanics are ages 10 to 18. “The kids come to the project so committed. We call a two-hour meeting every first and third Sunday of the month during 4-H season and usually four to five hours later we have to start kicking them out – reminding them your parents are waiting for you, you have things to do for school.

“To see the interaction between these kids is amazing. It’s a really close-knit group,” Rod said. “They do 98 percent of the work. We’re just there to supervise and make sure everything is safe.”

They’re also on the go. “They do tractor pulls and parades and show the tractors all over the county. We have a lot of fun with them. We have a restored 1959 Ford that wins every time it goes somewhere. It’s a real beauty. We have a whole shelf full of trophies.”

Rob and his wife Bettina discovered their passion for 4-H through their two children.

“We started out with two pygmy goats and now we have 15. My daughter has aged out, so now she plans to get her 4-H leader certification. She still helps as much as possible.”

“My son is very involved in 4-H. He’s vice president of Northwest Outriders 4-H club and also does breeding Boer goats, pygmy goats, poultry, rocketry, welding and of course tractor. All of the tractor project members are in multiple projects. We are a very active group.”

Bettina came to the United States from Germany and knew nothing of 4-H until eight years ago.

“Then we got bit by the 4-H bug,” Rod said.
Destiny Calls

Combining Passion for Animals and Medicine
Pima County

Christine Staten was destined to be a veterinarian – even though from age five she knew she wanted to be an obstetrician and deliver babies.

She joined 4-H at age nine – raising horses, dogs, pygmy goats, rabbits, sheep and cavies – until she “aged out.” Then she immediately became a Pima County 4-H leader.

“I worked in labor and delivery as an OB-GYN technician for seven years and I loved it,” Christine said. “For fun on my days off, I would run around with Dr. Barbara Page, who was my vet when I was in 4-H with my goats and horses. I loved it.”

Christine completed her pre-med training at the University of Arizona, then began applying to medical schools to become an obstetrician.

“I had many interviews all over the country and at every single one I was asked ‘Why don’t you want to be a veterinarian?’

“And I really stumbled over the answer. Finally I decided I had to script an answer to that question. I sat down – and I couldn’t come up with anything.”

About the same time a physician she worked with talked to her about the negatives of human medicine. “I also was interviewing friends who were physicians and obstetricians and a lot of them didn’t like their jobs as much as they thought they would.

“It all kind of came together the same week. It hit me. I realized where my passion was.

Being a veterinarian combined my love for animals and love for medicine all in one.

“I called all the medical schools and told them I do not want to know if I got accepted – because if I knew I was accepted, I would probably go. I never looked back.”

Continuing to work fulltime in labor and delivery, she also began working part time with Dr. Page as a veterinary technician.

“I applied to vet school and got in immediately. At that time it was really hard to get into vet schools – like 1 in 8 who applied got accepted.

“My grade point average was good – but it wasn’t great. A lot of my friends had much higher GPAs. There’s not a doubt in my mind that I got in based on my 4-H experience.

“On the application I had to add extra pages about my animal experience, veterinary experience, leadership qualities, community service. I had this application filled top to bottom, filled to the brim with 4-H – and I know that’s what got me in and put my application above the better students.”

The Tucson native left her beloved desert climate for Colorado State University School of Veterinary Medicine in Fort Collins, the alma mater of her mentor.

Already married, “I started school with an infant on my hip and had another child in school, then three more since I got out of veterinary school.”

After graduating in 1999, Dr. Staten joined Dr. Page at Tortolita Veterinary Services. In 2005 they opened Adobe Veterinary Center, a haul-in facility serving horses, livestock and small animals. She specializes in horses and livestock.

“We see 35 percent of our patients at the clinic.” The vets drive to the rest – with their mobile clinics.

“I love being a vet. Every day is different. Every day is exciting and gives me an opportunity to do a lot of owner education about preventive medicine. This keeps my patients healthier.”

Every spring you’ll find her at the Pima County Fair – yet again following in her mentor’s footsteps. “She let me shadow her including at the fair. I’d just tag along and think ‘someday I might be able to do this.’

“It’s like the dream of my life. I got to be at the fair as a 4-H member, then as a 4-H leader and now I get to be the vet. It’s just the coolest thing. It’s my favorite week of year. I love watching kids growing up the way I did. I learned a lot of life skills through my 4-H activities.”

Above: Christine Staten, as a 4-Her showing, and now as a Doctor of Veterinary Medicine.
4-H youth in Arizona who aspire to be veterinarians will no longer have to go out of state for their training. They’ll be able to earn their Doctor of Veterinary Medicine degree at the University of Arizona College of Agriculture and Life Sciences in the innovative fast-track Veterinary Medical & Surgical Program.

Students in the program will pay less, get more educational content and graduate sooner than they would at a traditional veterinary college.

“We will provide an exceptional education at a cost that is lower than any other school in North America,” said Dr. Bonnie Buntain, coordinator of the new program set to launch in August of 2016.

She is a pioneer in veterinary medicine who served as a consultant to the UA before being hired to head the program. She also helped establish a veterinary school at the University of Calgary, had her own private equine practice and worked 17 years in the federal government, including serving as chief public health veterinarian.

The new UA program was approved by the Arizona Board of Regents in September 2014 after the university received a $9 million gift from the Kemper and Ethel Marley Foundation. Proponents say this will address a shortage of veterinarians in Arizona, particularly in rural areas, while allowing students to graduate on firmer financial ground.

“We will at least halve the cost of a D.V.M. education compared to other public programs, and quarter the cost compared with private programs – all while increasing educational content by almost 40 percent,” she said.

“We plan to have the best value for the money here in Arizona, a unique educational opportunity that will have people working as veterinarians years sooner than any other program.”

In addition to private practice, UA graduates will be trained for positions in federal, state and local government in food safety and security, biomedical research and other areas.

“We have so many kids who discover their passion for caring for animals through 4-H, then go on to become veterinarians,” said Kirk Astroth, director of 4-H Youth Development in Arizona. “Until now they could get their undergraduate degree in veterinary studies at the UA, but had to go out of state to complete their D.V.M. Now they can come to the UA for high-quality training that’s more affordable and closer to home. Our 4-H leaders and youth are really excited about this new opportunity.”

Students will receive clinical training not only in satellite university facilities statewide – but also with practicing veterinarians in private and public facilities.

The college is partnering with Arizona veterinarians and members of other industries that employ D.V.M.s, including a clinical advisory group, to develop the competencies that graduates must have.

Among the partners is Dr. Mary Kay Klein of Southwest Veterinary Oncology. “Shane Burgess is coming at this from a whole new perspective and is addressing issues that have become stumbling blocks for students to become veterinarians,” Klein said of the college’s dean.

“Ultimately we want graduates who are problem solvers and logical thinkers, with all the tools and knowledge they need to be successful – and the ability to put that knowledge to use in a clinical setting,” she said.

Dr. Christine Staten of Adobe Veterinary Clinic is eager to start working with the students. “This is a phenomenal program.” She specializes in horses and livestock, treating her patients at the haul-in clinic and around the region. “It will be a great hands-on learning experience for these students to just get in the truck and go on calls.”

The application process opens in the spring of 2016. More information is online at http://vmsp.cals.arizona.edu.

Above: Many kids discover a passion for caring for animals through 4-H, then go on to become veterinarians.
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