Google and the National 4-H Council are partnering for a new computer science and computational thinking initiative, with USU Extension 4-H leading the way for the rest of the country.

USU Extension faculty members co-created the curriculum and resources for a computer science career pathway, which will roll out to the rest of the 4-H programs across the country. The new program will teach 4-H members technical skills like coding as well as teamwork, resilience, and problem solving.

The program is funded by a $1.5 million grant to National 4-H from Google. With this support, the 4-H program will equip community educators with curriculum, training, devices, and the support of Google computer science experts.

Recently, USU Extension faculty members led a training for the new program. Representatives from 4-H programs from 10 states traveled to Utah to learn about a variety of resources and activities for computer science in their state.

As with many 4-H programs, this program will feature teen-led, peer-to-peer teaching.
According to the American Foundation for Suicide Prevention: “Suicide is a leading cause of death – and it’s preventable.”

Based on a 2013 assessment, suicide was selected as the greatest community health concern in Davis County. Shortly after, suicide was reported to be the leading cause of death for Utah youth, ages 10 -17; a rate that tripled from 2007-2014.

In the fall of 2015, Davis County 4-H received funding from the federal Substance Abuse and Mental Health Administration to address youth experiencing mental health challenges. The 3-year, $315,791 award provides training for adult leaders so they can become “First Aiders” and assist youth who have mental health concerns. The first two years have shown measurable results.

What adult First Aiders have said about the training they received in Youth Mental Health First Aid:

- "I am feeling more confident in my ability to get students to the best place for them to receive the kind of help they need...”
- "I believe the skills I’ve learned have helped me reach students who are struggling emotionally. They have taught me to be patient, listen, and offer tools for dealing with hard things."

USU Extension 4-H members have been involved in programs to help alleviate hunger for more than 417,000 Utahns who are unsure of where their next meal will come from.

2015 marked the 11th year of the 4-H youth donated meat program service project, where youth and local volunteers sorted meat and food items to distribute through Utah Food Bank to local food pantries. More than 1 million pounds of meat and food items were distributed to Utah families in need since the program began in 2005. That year, the Farmington 4-H Lamb Club donated meat as a service project. In the following years, corporate and private donors raised money to buy 4-H livestock sold at county and state fair auctions, the auction “floor price” went to the 4-Hers, and the meat was sorted and donated to the Utah Food Bank. It was then distributed to their 134 partnering agencies throughout the state.

Davis County 4-H now focuses on donating meat to the Safe Harbor Women’s Shelter located in Kaysville. With an average of 40 battered and abused women and children housed monthly at the shelter, 4-H has become their only source of meat over the past 4 years.
Plant pest problems can be overwhelming and can sometimes lead to misapplication of pesticides. This may contribute to environmental degradation, human exposure, and loss of profits. The USU Integrated Pest Management (IPM) crop and landscape newsletters provide advanced pest activity warnings and best management practices. These advisories raise awareness and adoption of IPM practices and showcase the importance of conserving natural resources through pesticide reduction.

In the last 10 years, the subscription base has increased over 17-fold, with over 33,000 total subscriptions, and almost 12,000 unique subscribers as of summer 2017. Ninety-four percent of subscribers use the USU advisories as their main source of pest management information.

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>BENEFITS</th>
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<tbody>
<tr>
<td>• Learn about pests</td>
<td>• Helps avoid pesticide overuse</td>
</tr>
<tr>
<td>• Implement preventive practices</td>
<td>• Enhances produce safety and quality</td>
</tr>
<tr>
<td>• Monitor for pests</td>
<td>• Minimizes costs</td>
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<tr>
<td>• Assess need for intervention</td>
<td>• Enhances natural enemies</td>
</tr>
<tr>
<td>• Implement a variety of tactics</td>
<td>• Improves crop pollination by protecting bees</td>
</tr>
<tr>
<td>• Evaluate results</td>
<td>• Protects humans and the environment</td>
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Adoptions of IPM practices and changes in pesticide use in the last 10 years:

- 86% now call themselves IPM practitioners (low, medium, or high)
- 83% increase in pest monitoring
- 70% say the advisories help them maintain plant health
- 20% report reduced costs
- 81% now do not spray during bloom
- 43% decreased use of broad spectrum pesticides
- 42% have switched to organic or softer materials

The Sunnyvale Farmers market was organized by the International Rescue Committee (IRC) and placed in a neighborhood with a high immigrant and refugee population. The area is one of the largest food deserts in Salt Lake County, meaning it is difficult to access affordable or quality fresh food. To help counter this, the market brings in farmers who provide affordable, fresh food. SNAP users may also use the Fresh Food Fund, which provides a dollar-to-dollar match for food money spent. In addition, Food Sense has a booth at the market that teaches about easy, healthy foods that can be made with items from the market, and a variety of games are offered to encourage physical activity for the youth who attend.

**FOOD SENSE ASSISTS REFUGEES IN SALT LAKE CITY**

The Food $ense (SNAP-Ed) program is the educational component of the supplemental nutrition assistance program (formerly known as food stamps) and promotes better health through nutritious food choices and physical activity. The program assists and educates people around the state, including refugees.

Utah has helped resettle about 50,000 refugees and accepts around 1,100 each year. Food $ense partners with multiple organizations to provide education to the refugees, and classes are taught in English to facilitate language exposure.

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RESEARCH PROJECTS ASSIST WITH AG IRRIGATION

Over 10,000 agriculture irrigators use about 80 percent of Utah’s diverted water to irrigate about 1.2 million acres. In Utah, more agriculture irrigators rely on USU Extension as their source of information for reducing irrigation costs and conserving water than any other source, according to a USDA Agriculture Statistical Service survey of 7,103 Utah farmers representing 741,274 irrigated acres. Farm and Ranch Irrigation Survey (2013).

Fifteen current Extension irrigation research projects help irrigators efficiently use water and prepare for drought.

Irrigation is one of many agricultural inputs that make Utah’s agriculture successful. The economic benefits to irrigated agriculture from improved irrigation systems and management is significant. The impacts of Extension education and demonstration are difficult to assess. However, surveys from farmers attending Extension crop schools in 2013 and 2014 indicate an increased yield of 7.4 percent for small grains, corn, and hay (grass and alfalfa). If these yield increases are applicable for 50 percent of the irrigated land, the benefit is approximately $24 million per year to the producers and $42 million to the state’s economy.

SBDC HELPS BUSINESSES LAUNCH AND GROW

In 2016, USU was selected by the Small Business Administration (SBA) to host the Utah Small Business Development Center (SBDC) Network. The lead center is located at the USU campus in Brigham City through USU Extension and includes regional service centers throughout Utah.

SBDCs provide business owners with advising, mentoring and training to help launch and grow their businesses. The SBDC currently hosts 15 centers located at colleges and universities around the state.

As an example, the Logan SBDC helped Top Job Asphalt update their critical software systems and implement lean management technology to strengthen their business practices. In addition, the SBDC helped them improve financial management, allowing them to make smart investments and also helped implement a management automation system to further improve business efficiency. Top Job Asphalt started as a small company with a handful of employees and has grown into a successful, multi-state business with strong ties to the community.