

PINAL COUNTY

QUARTERLY NEWSLETTER

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Cooperative Extension, the outreach arm of the University of Arizona, brings the University to the people.

The faculty and staff in the Pinal County Extension office are part of a non-formal education network bringing research-based information into communities to help people improve their lives.

Cooperative Extension is committed to delivering high-quality, relevant educational programs and information to Pinal County citizens and communities.

The sunlight is changing, temperatures are cooling down, and we have begun to see our neighbors again. It must be October!

While we are starting cotton harvest here in Pinal County, other garden crops are just getting started. If you are wondering what to plant in your fall and winter garden, check in with a Master Gardener, or if you love gardening and all things plant related, consider taking the Master Gardener course and volunteering to help teach others.

Our focus here at Cooperative Extension has historically been around garden and landscape plants and agriculture with our Agronomy and Horticulture faculty and staff. Yet those are only two of the program areas that we bring to our communities. Expanded Food Nutrition Education, 4-H Youth Development, Early Childhood Screenings, and Child Care Health Consultation all are here to bring what is happening at the university and research level directly to the communities in Pinal County with the goal of improving lives.

Come by the office or send us an email with questions or requests for programming. We would love to hear from you.

Greeta Mills

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4-H YOUTH DEVELOPMENT



4-H: BUILDING A BEYOND READY GENERATION

Submitted by Esther Turner, Associate Agent, 4-H Youth Development

What does it really mean to be "ready" for the future? For 4-H, the answer goes further than a diploma or a resume line. It's about being Beyond Ready: prepared not just for a single next step, but for a lifetime of change, challenge, and opportunity.

Beyond Ready is a national 4-H initiative built on a simple idea: today's young people are growing up in a world where the old, predictable paths to success (school, then a job, then retirement) no longer apply the way they used to. Careers shift. Technology moves fast. The skills that matter most are often the ones that can't be taught from a textbook alone: adaptability, confidence, problem solving, and the ability to work well with others.

That's exactly where 4-H comes in.

TWO KINDS OF READY

The Beyond Ready framework focuses on preparing youth in two connected ways:

Ready for Work means building real-world capabilities such as critical thinking, professionalism, leadership, and career exploration. In 4-H, this happens through hands-on project work, whether it's a STEM challenge, an agriculture project, or a leadership role in a club, along with real experiences like internships, presentations, and community service.

Ready for Life means nurturing the social, emotional, and cognitive strengths that help young people succeed personally, not just professionally. That includes a strong sense of identity and values, healthy relationships, resilience, and the ability to understand and respect people who are different from them.

Together, these two goals shape what 4-H has always done best: helping young people discover their sparks (the interests and passions that light them up) and turning those sparks into lifelong skills.



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4-H YOUTH DEVELOPMENT



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WHAT THIS LOOKS LIKE IN PINAL COUNTY

Right here in Pinal County, our members are living out Beyond Ready every day:

STEM Saturdays give youth hands-on experience with science, technology, engineering, and math, building the kind of curiosity and problem-solving skills that translate directly into future careers.

Ag-Ventures connects young people to agriculture, food systems, and the natural world, grounding them in real-world knowledge and responsibility.

Livestock teaches discipline, focus, and safety, along with mentorship from caring adult volunteers.

Ambassadors builds leadership, public speaking, and civic engagement skills as youth represent 4-H in their communities.

In 4-H, every project, club meeting, and county event is an opportunity for a young person to grow toward being Beyond Ready.

WHY IT MATTERS

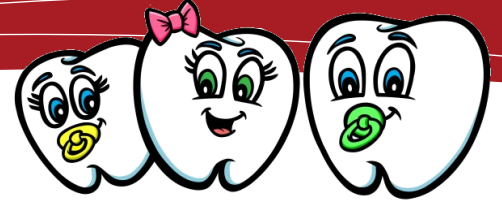
The national Beyond Ready initiative has an ambitious goal: reaching 10 million young people who are engaged, connected, and thriving. Here in our community, that starts with inviting more young people to discover what 4-H has to offer - one new member, one club, and one caring volunteer at a time.

When our Pinal County 4-H members leave a meeting more confident than when they arrived, when they take on a leadership role for the first time, or when they discover a passion that shapes their future plans, that's Beyond Ready in action.

Want to learn more about getting your family involved in Pinal County 4-H? Contact your local Extension office to find out how to join.



FIRST SMILES ORAL HEALTH



TOOTH-FRIENDLY SNACKS ARE POSSIBLE

Submitted by Greeta Mills, RDH MEd, Oral Health Professional

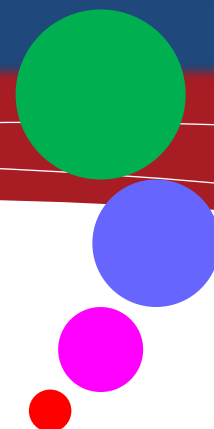
When chatting with preschoolers about teeth and tooth brushing, the discussion quickly turns to the “sugar bugs that live in our mouth and make holes in our teeth, called cavities.”

Bacteria that live in our mouth eat what we eat and drink. When we eat foods that are high in sugar and starch, the bacteria break it down and produce acid. The acid that is produced by the “sugar bugs” attacks the teeth, causing cavities. The more often we eat and drink these foods, the more often acid is produced, increasing our risk for cavities. We are finding snacks like crackers (think yellow fish-shaped crackers and cute bear-shaped graham crackers), chips, and cereal bars are just as likely to cause cavities as sweets and candy. In many homes, these snacks are more common than sweet snacks.



Here are a few tooth-friendly snack suggestions.

- **Apples and other fresh fruit** give you a sweet taste without the risk of cavities. They are crunchy and contain a lot of water which helps stimulate your saliva. This will help clean the teeth of the acids while you are chewing. Fresh fruit doesn't get stuck in the grooves in the teeth like dried fruit does. Even though dried fruit is still fruit, the water has been removed which means that the sugar content is very high. One cup of raisins has about as much sugar as three cups of marshmallows! It is much better to eat grapes than raisins if you are looking for a tooth-friendly snack.
- **Celery and Carrots** also contain a lot of water and make good crunchy snacks. Plus, there's a spot in the celery for cream cheese, peanut butter or hummus to make an even better option.
- **Cheese sticks and cubes** make great tooth-healthy snacks as well. Cheese helps to reduce the acidity of the mouth and the calcium and protein help make the tooth stronger. “Sugar bugs” are not very fond of cheese.
- **Yogurt** can be a good tooth-friendly snack as well, if it is the plain yogurt. Some of the sweetened yogurts have as much sugar as a can of soda. Try adding chopped or sliced fresh fruit to your plain yogurt to keep it a tooth-friendly snack.
- **Plain water** is best for teeth. It helps rinse the acid from your mouth, and doesn't add the sugar that juice, sports drinks, and soda will.



HOLIDAYS & DEVELOPMENT FOR YOUR LITTLE ONES

Submitted by Muriel Gutierrez, Community Outreach Assistant II

“While we try to teach our children about life, our children teach us what life is all about.” — Angela Schwindt

With the holidays around the corner and the busyness that often comes with this time of year, we don’t always think about how holiday activities can support the development of our little ones, or what they can teach us in the process. Believe it or not, this can be a time of great growth in cognitive, social-emotional, creative, fine-motor, and gross-motor skills.

Holiday traditions provide a natural and motivating environment for learning through storytelling, songs, crafts, baking, and role-play. These activities can strengthen memory, encourage problem-solving and critical thinking, and expand language skills. They can also support social-emotional development by encouraging emotional connection, cooperation, empathy, security, and confidence.

Continuing family traditions, as well as creating new ones, can play an important role in what researchers call ‘emotional regulation’ and ‘social competence’. Traditions provide children with familiar patterns and expectations, which can help them feel secure while also giving them opportunities to participate, make choices, and practice new skills.

Traditions often involve planning, decision-making, and problem-solving. Teaching children about family traditions can help them understand and appreciate long-standing traditions while also encouraging them to imagine and create new ones. Parents can involve children in planning menus, decorating, choosing activities, or coming up with games such as gift exchanges. These experiences provide opportunities to practice focus, planning, flexibility, and impulse control.

Holiday celebrations also naturally involve conversation and meaningful interaction with people of different ages. Children can practice expressing gratitude and generosity, recognizing and respecting different perspectives, taking turns, sharing, and participating in group activities. All are important social skills.



The holidays also offer many opportunities to develop fine- and gross-motor skills through everyday activities and play. Holiday crafts such as cutting seasonal decorations, stringing beads or candy canes, gluing pom-poms, and making paper table decorations allow children to practice hand strength, bilateral coordination, and the pincer grasp. Stirring batter, rolling

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Other simple activities, such as placing lightweight ornaments, tearing tape, or folding paper for wrapping and decorations, provide opportunities to practice grasp-and-release control - all while having fun. Holiday-themed movement games, such as “Santa Says,” or simple agility courses can encourage balance, coordination, and core strength. Digging in the snow, helping to rake leaves, or simply walking through uneven seasonal terrain can provide additional opportunities to challenge balance, coordination, and physical strength. Dancing to holiday music is another fun way to work on balance, rhythm, and spatial awareness.



The best part? Many of these activities are low-cost and easy to incorporate into busy holiday schedules.

It's also important to remember that the holidays can be a high-stress time for families. Keep checking in with yourself and your child; try to maintain regular sleep and meal schedules as much as possible. Consistency with naps, mealtimes, and bedtime rituals can help provide a sense of stability during the holiday chaos.

Little ones can become easily overstimulated, and they often pick up on adult stress. Teach them about boundaries and model calm behavior when possible. It's okay to say no to extra commitments and to take a moment when things become messy or overwhelming.

Before attending a potentially overwhelming event, talk with your child about the plans, who will be there, and what they can expect. Packing familiar snacks and comfort items or toys can also help prevent mealtime struggles and provide reassurance in unfamiliar settings.

Most of all, enjoy these upcoming fall and winter seasons with your little one. You will both learn, grow, and create memories together along the way.

Sources

- Galli, G., Bauch, E. M., & Gruber, M. J. (2011). *When anticipation aids long-term memory: What cognitive and neural processes are involved?* The Journal of Neuroscience. <https://pmc.ncbi.nlm.nih.gov/articles/PMC6622893/>
- Key Lime Designs. (2026, June 29). *The science behind holiday traditions: How celebration impacts child development and*

FIELD CROPS SYSTEMS



AGRONOMY PROGRAM

Submitted by Avik Mukherjee, Assistant Agent, Agriculture

Educational Program (Tent Talk) & Stakeholders' Need-Focused Field Trial

Upcoming Event

Annual Central Arizona Farmer Field Day

November 18, 2026, Maricopa Ag Center, Maricopa, AZ

Research Updates

Herbicide Efficacy Trial in Cotton (ongoing)	15 treatments (Pre- and Post-emergence)	Maricopa Agricultural Center, Maricopa, AZ
Herbicide Efficacy Trial in Cotton (ongoing)	6 Treatments, (Pre- and Post Emergence)	Maricopa Agricultural Center, Maricopa, AZ

Program Impact (July-September)

65+ Stakeholder Engagement	2 Workshops 1 Tent Talk 1 Webinar	Stakeholder Surveys
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Smart IPM Workshop



Cotton Tent Talk



Herbicide Trial (Cotton)

Program Webpage: <https://extension.arizona.edu/programs/pinal-county-agronomy-program>

Facebook Page: <https://www.facebook.com/pinal.agronomy>

FOOD SAFETY TIPS

CLEAN

Wash hands with soap and warm water for 20 seconds

Clean surfaces after preparing foods and before moving on to the next item

Rinse fresh fruits and veggies.

SEPARATE

Separate raw meats, eggs, poultry and seafood from other foods.

Use separate cutting boards to avoid cross-contamination.

COOK

Cook to the proper temperatures. Use a meat thermometer to check internal temperatures

145° Beef, pork, veal and lamb

160° Eggs, ground meat

165° Poultry, leftovers

CHILL

Refrigerate foods promptly

Store or freeze foods to keep them from spoiling

Refrigerator temperature should be at 40° or below while freezer temperature should be at 0° or below.

CONTACT

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As the holiday season is approaching very quickly, be sure to always follow the four steps of Clean, Separate, Cook and Chill as you prepare your holiday and everyday meals. These steps can help keep your family safe from any type of food poisoning. To learn more food safety tips, budgeting tips and new recipes that EFNEP has to offer give us a call.



Your Baby Eats What You Eat

You make the difference
in your baby's health.

Today's Mom, a **FREE**
8-class workshop, can help.

- **Keep Baby Safe**
- **Food Safety**
- **Pregnancy Concerns**
- **Healthy Choices**
- **Physical Activity**
- **Recipe Tasting**
- **Breastfeeding**



Date/Time: Fall 2027

Place: Pinal County

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Cooperative Extension

This work is supported by the Expanded Food and Nutrition Education Program from the USDA National Institute of Food and Agriculture. USDA is an equal opportunity provider. The University of Arizona is an Equal Opportunity Employer - Minorities/Women/Vets/Disabled.

extension
EXPANDED FOOD & NUTRITION EDUCATION PROGRAM
www.aces.edu

What Is a Pinal County Master Gardener?

Real People. Local Gardens. A Healthier Community.

Ask a
Master Gardener...
we love
plant questions!

Have you ever...

- Wondered what's wrong with your tomato plant?
- Spotted a mystery bug on your roses?
- Questioned if your soil is happy (or not)?

If so, you're not alone—
and that's where a Pinal County
Master Gardener can help!

What Do Pinal County Master Gardeners Do?

We do a little bit of everything — and yes, sometimes we talk to plants. (Whether they listen is another question.)



Staff the Pinal County Master Gardeners Plant Helpline and help answer home horticulture questions.



Help residents grow food, support pollinators, and create healthier, more resilient gardens.



Maintain demonstration gardens where residents can see desert-friendly gardening in action.



Teach workshops and give presentations throughout the county.



Support school and community garden projects.



Keep learning so we can continue sharing reliable, research-based information.



Our goal is simple:
help Pinal County residents become
more successful gardeners —
without having to learn every lesson
the hard way!

So, What Exactly Is a Master Gardener?

A Master Gardener is a volunteer who has completed a comprehensive training program through the University of Arizona Cooperative Extension. Here in Pinal County, our training is tailored to the challenges—and occasional surprises—of gardening in the low desert.

Master Gardeners learn about soils, irrigation, pest management, plant selection, and xeriscape design. Then, we keep learning! We attend workshops and seminars to earn continuing education hours and keep our gardening knowledge and skills growing.

Need a Little Help in the Garden?

The Pinal County Master Gardeners **Plant Helpline** provides free, region-specific horticulture expertise for home gardeners.



Call (520) 836-5221 or send an email with your name, address, phone number, and a description of your gardening issue to jajepsen@arizona.edu.



Send photos if you can!
A picture of the plant, the problem area, and any insects can give us valuable clues. After all, sometimes a picture really is worth a thousand words — or at least a thousand guesses about what's eating your tomato plant.



Healthy plants.
Happy gardeners.
Stronger communities.

Where Did This Idea Come From?

The Master Gardener program began with Washington State University Extension in 1972 and has since spread to Extension offices across the country.

In Arizona, Master Gardeners can be found in all fifteen counties, as well as throughout many of the Native American Nations.

Here in Pinal County, we have five distinct Master Gardener groups:

- Casa Grande
- Maricopa
- San Tan Valley
- Southeast Superstition Mountain

That's a lot of gardeners —
and a lot of desert dirt!

A Familiar Model

If the Master Gardener program sounds a little like 4-H, there's a good reason.

Both programs rely on trained adult volunteers to extend the reach of University of Arizona Cooperative Extension programs throughout Pinal County.

The difference is what we're growing.

Master Gardeners focus on horticulture education for the public, while 4-H volunteers focus on youth development.

Different missions, same goal: stronger communities!

Want to Become a Master Gardener?

The Pinal County Master Gardener online training program is offered twice a year.



Spring Training
January – May



Fall Training
July – December

Registration is currently open for the Spring training program!

Check out the flyer on the following page
for more information on registration.



THE UNIVERSITY OF ARIZONA
Cooperative Extension
Pinal County



Grow your knowledge.
Grow your garden.
Grow your community.

University of Arizona
Cooperative Extension, Pinal County

Jim Jepsen, Community Outreach Pro II—Horticulture
jajepsen@arizona.edu | (520) 340-4489

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FIND US. LIKE US. FOLLOW US.

Facebook Pages:

- [Maricopa Master Gardeners](#)
- [Pinal County 4-H](#)
- [Sensory & Developmental Screening](#)

Webpage: [CALS, Pinal County](#)



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4-H provides educational opportunities for youth to become capable and contributing members of a global community. Children, ages 5-19, learn about healthy lifestyles, animals, plant sciences, and leadership. *Contact: Esther Turner at (520) 340-4815 or eturner@cals.arizona.edu*

Child Care Health Consultations (CCHC) develops relationships with childcare facilities to provide training to staff that will improve their knowledge and practice in the childcare setting. *Contact: Ashley Dixon at (928) 978-2911 or adixon@arizona.edu*

Developmental Screening Program reaches out to families with children, ages 0-5, to screen for early developmental milestones such as gross and fine motor skills, communication, personal-social skills, and problem-solving capacities. *Contact: Sam Colarusso at (520) 340-4945 or colarusso@cals.arizona.edu*

Expanded Food and Nutrition Education Program (EFNEP) is a nutrition education class designed to assist limited resource families in eating smart and being active and in acquiring the knowledge, skills, and behavioral changes necessary to contribute to their personal development and the improvement of the total family diet, nutritional and physical well-being. *Contact: Esmeralda Castillo at (520) 788-6217 or ecastill@cals.arizona.edu*

Field Crops Systems uses research and education efforts to work to improve field crop productivity and global food and fiber supply, farm economic viability, and protecting the environment. *Contact: Avik Mukherjee at (520) 340-4385 or avikm@arizona.edu*

First Smiles is an oral health program that provides preventative oral health education, oral screening, referral to dentists for children birth to age five; and fluoride varnishing for children with emergent teeth up to age five. *Contact: Greeta Mills at (520) 340-4973 or gmills@arizona.edu*

Horticulture Program develops and delivers educational information, structured programming, and technical support to the consumer and commercial horticulture sectors, as well as urban agriculture and food systems in Pinal County. *Contact: James Jepsen at (520) 340-4489 or jjepsen@arizona.edu*

MAC (Maricopa Agricultural Center) Farm Ag-Ventures educational programs include a combination of videos, educational presenters, hands-on learning experiences and tractor-trailer rides around their 2,200 acre farm for a close-up view of what makes a working farm operate. *Contact: Esther Turner at (520) 340-4815 or eturner@cals.arizona.edu*

Sensory Screening Program provides free screenings of children, ages 0-5, for vision and hearing impairments that could affect developmental growth. *Contact: Sam Colarusso at (520) 340-4945 or colarusso@cals.arizona.edu*