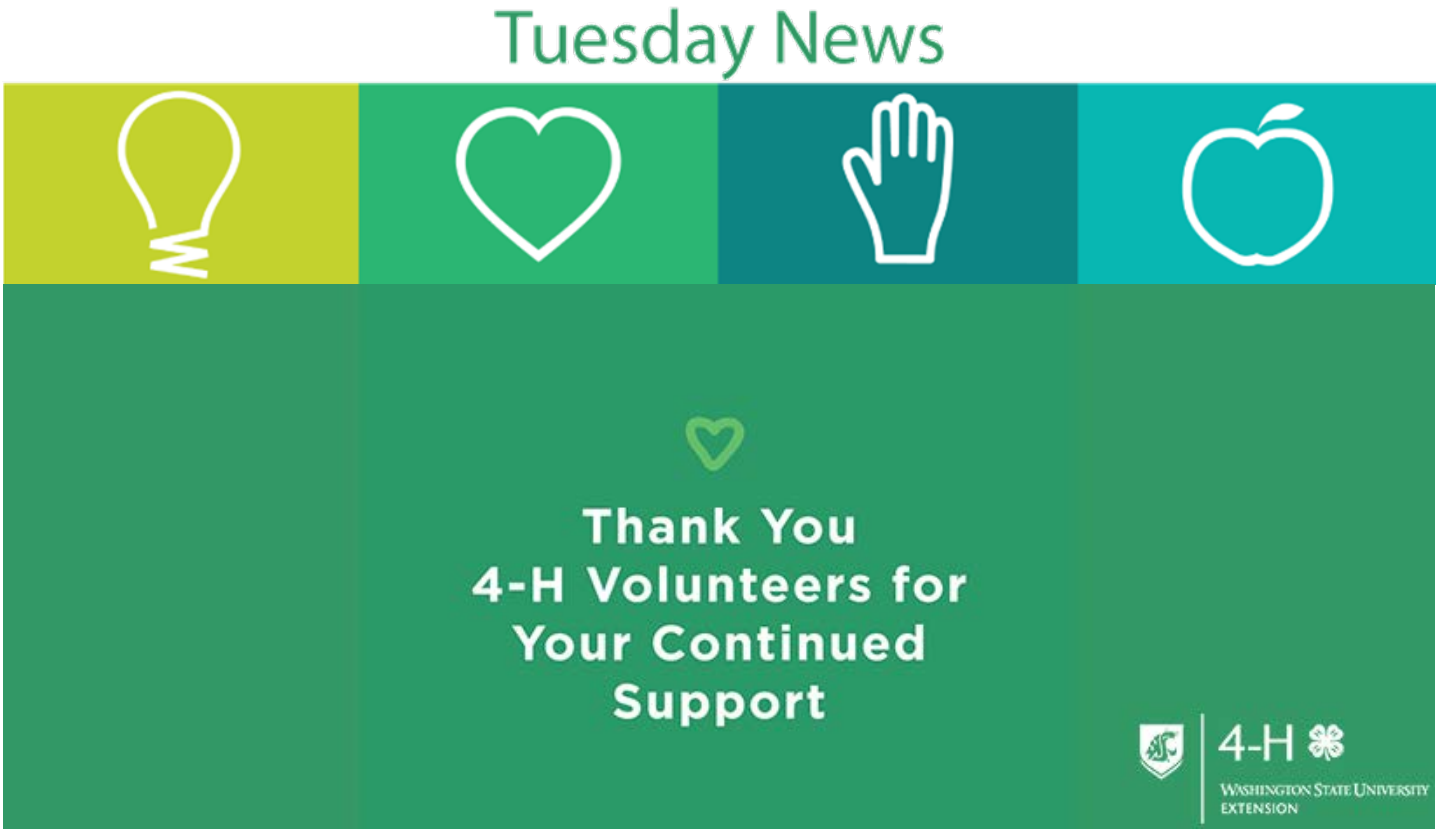

Tuesday News – October 10, 2023

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Features

WSU Thurston County Extension Hosts 4-H Youth In Agriculture Series – Chicken Keep and Cull Workshop On October 22!

Emily Killeen

The 4-H Youth In Agriculture Series is a workshop series focused on raising animals and growing food for home use. It is hosted by the WSU Extension Thurston County 4-H Youth Development Program.

Workshop Description: Learn how to evaluate chickens based on the American Poultry Association (APA) Standard of Perfection. Faults, disqualifications, and health issues to cull for will be discussed while sorting a flock of heritage breed,

dual purpose chickens. The second part of the workshop will include a chicken processing demonstration using the Thurston County Conservations District's chicken processing rental equipment. The second part of the workshop is optional.

What: Chicken Keep and Cull Workshop – first in the Youth in Agriculture series

When: Sunday, October 22, 2023

Time: starting at 1 p.m.

Who: Officially enrolled 4-H and FFA members and their adult mentors. (Parents/guardians, advisors, and/or 4-H club leaders are encouraged to attend with youth participants to help supervise and support learning after the workshop.)

IMPORTANT Required for the chicken processing portion (second half) of the workshop, all youth must attend with an adult chaperone/advisor/leader.

Where: Thurston County Fairgrounds, specific building and parking instructions will be shared with pre-registered participants.

Pre-Registration Required. Please e-mail: tc4h@co.thurston.wa.us

Pre-register **by 10/19/23** with youth and adult participant names, club or chapter name, and youth ages. Note: a 4-H parent permission form will be required at check-in for those not enrolled in Thurston County 4-H.

Suggested cash donation of $5 per person or $10 per family

Questions? Call 360-867-2157 or e-mail **tc4h@co.thurston.wa.us**

Download the workshop flyer **HERE**!

State 4-H Fair Equine Presentation Results Announced

Jennifer Leach

Congratulations to the seven senior 4-H members who participated in the State Equine presentations, held virtually on Sunday, September 17th. There were two team presentations, Charlotte Pestinger and Camille Talbot from Thurston County and Sierra Carlson and Sebastion Palmer from Snohomish County, and two individual presentations, Dylan Qureshi from Snohomish County and Norah Gilbertson from Spokane County. Emmalee Broadbent from Snohomish County. presented for public speaking.

The top blue-ribbon winners in the above three categories are eligible to represent the Washington State 4-H Horse Program at the national contest called the Eastern National 4-H Horse Roundup that will be November 3rd through 5th in

Louisville, Kentucky. They will be joining the State 4-H Horse Bowl Team and 4-H State Hippology teams, both from Snohomish County, along with the top four individuals from the State Horse Judging Contest.

The 4-H members representing the equine presentations at the National contest are the team of Charlotte Pestinger and Camille Talbot and Dylan Qureshi doing his individual presentation.

The contest could not have been successful without the efforts of the “officials,” includes judges Kelli Whidden and Alyssa Bowers, along with timer/scorekeeper-Ramona Leber, and tech support from Kim Baker.

On behalf of the Washington State 4-H Horse Program, congratulations to all the state winners; we wish them luck at the 2023 Eastern National Equine 4-H Horse Roundup!.

Submitted by Jennifer Leach, State 4-H Horse Contact and Coordinator of the State Equine Presentation contest

Save The Date! Washington State 4-H Volunteer Recognition Luncheon – October 28th!

Jana Ferris

Please join us in honoring our volunteers! Our 2023/2022 Volunteer Recognition Luncheon will be held Saturday, October 28 at 12:30 p.m. at The Armory in Ellensburg, WA. All state awardees (Alumni Award, Salute to Excellence Ten Year and Lifetime, Heather Rider Award, Volunteer Staff Award, [state] Friend of 4-H AND Hall of Fame) for years 2020, 2021, 2022, and 2023 will be honored. Volunteers of the Year and Teen Leaders of the Year for 2022 and 2023 will be honored through narrated video during the program.

All state awardees will receive an invitation directly to reserve their space at the event and will RSVP as indicated on their invitations. Others may attend at a $20/person cost; registration for non-awardees opens on Friday, September 22, and can be found at: https://www.eventbrite.com/e/722452523947

Contact Jana Ferris at ferrisj@wsu.edu or 360-548-3301

Table Sponsorship Packages Are Available for the 2023 4-H Washington State Volunteer Recognition Luncheon

Denise Echelbarger

TABLE SPONSORSHIP PACKAGES ARE AVAILABLE FOR THE 2023 4-H WASHINGTON STATE VOLUNTEER RECOGNITION LUNCHEON

VOLUNTEERS...

Your sponsorship is a $250.00 investment that will help the 4-H Washington State Volunteer Recognition Luncheon celebrate the contributions of volunteers who promote the positive development of youth in communities.

Sponsorship includes your logo and recognition on-screen and signage during the event.

To sponsor ($250), go to our direct donation link for Washington State 4-H Excellence Fund at: https://bit.ly/WA4H or scan the QR code. Under Other, type in $250, and at proceed to checkout, under Additional Comments please type "Volunteer Luncheon"

If you would like to purchase tickets to attend the luncheon please visit https://www.eventbrite.com/e/722452523947

TSC Fall Paper Clover Campaign Kicks Off on October 4th!

Denise Echelbarger

The Fall 2023 **Tractor Supply** 4-H Clover Campaign is coming soon!. Tractor Supply campaign funds are to support 4-H camp and leadership experiences.

Planning to work with your local Tractor Supply Store? The store managers and cashiers have a lot on their plate, so it's usually helpful if the local 4-H clubs/program can reach out **(https://www.tsceventpartners.com/events/signup/1).**

That interaction can look different, depending on the situation. The clubs can ask to set up a table or display featuring the 4-H program in the store. It could also be as simple as telling them "thank you," or having a foods member bring them a plate of cookies for the breakroom. Anything we can do to stay top of mind is helpful. The campaign will happen either way – because it's programmed into the pin pad now – but when you've got employees who care about the 4-H program and are physically asking, it's always going to be more successful.

Best wishes for a successful Fall Paper Clover Campaign!

State 4-H Fair Board Seeks Qualified Candidates For State 4-H Fair Manager Position Opening

The State 4-H Fair Manager Position Is Now Open!

The job description for the State 4-H Fair Manager position is available for download by clicking HERE.

The State 4-H Fair Manager is not a WSU position, but reports directly to the State 4-H Fair Board. The salary is $32,500, paid in twelve monthly installments. There are no benefits associated with this position.

This is a part time position of about 1,000 hours annually, with extended hours during August and September, during the fair cycle in Puyallup, Washington.

The position will remain open until filled.

Please forward your cover letter and resume to:

Washington State 4-H Fair Board
PO Box 1225
Puyallup, Washington, 98371-0233

or by email to the Fair Board at **st4hfair@gmail.com**.

Ask Dr. Universe: How Do Fish Hear? — Lamarcus, 8, Ohio

*Check out the latest episode of the **Ask Dr. Universe podcast** and meet 17-year-old Adah Crandall, a youth climate organizer. She got started as a middle schooler!*

Dr. Universe: How do fish hear? — Lamarcus, 8, Ohio

Dear Lamarcus,

My goldfish roommate hates when people tap on his tank. The tapping sound he hears in the water is loud and scary.

I talked with my friend **Rikeem Sholes** about how fish hear. He's a fish scientist. He studies salmon hearing at Washington State University.

He told me that a fish's hearing system includes sensory cells in the inner ear and in a line along the outside of the fish's body and head. Some fish also use their swim bladder to have super hearing.

“A lot of people don’t realize that fish have ears,” Sholes said. “Fish don’t have external ears like we do. But they do have an inner ear that looks a little different from ours.”

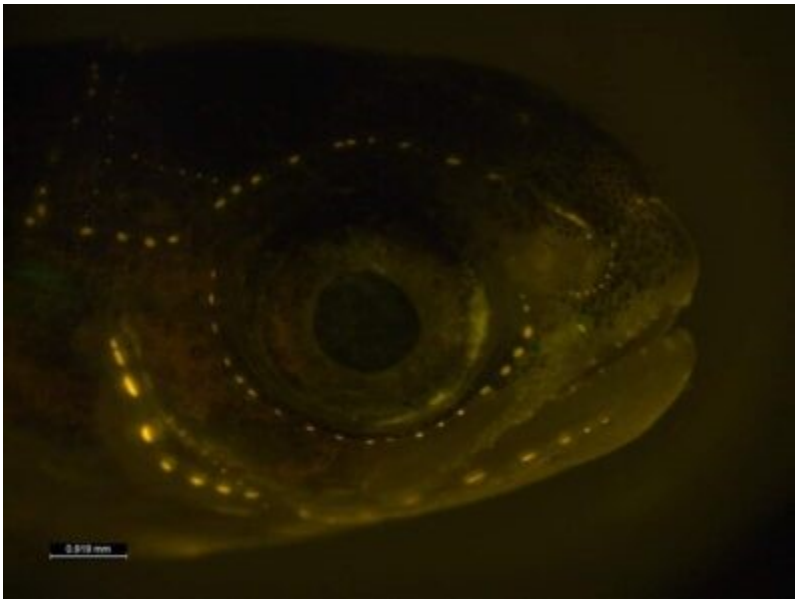
Your external ear is the flappy part attached to your head. It helps you collect sounds from the air. But the **sounds fish hear** travel through water. So, fish ears are under their skin.

Three dense stones sit inside a fish’s ear—called otoliths or ear stones. They’re made of calcium carbonate just like bones.

Tucked under those ear stones are sensory cells called hair cells. They’re not really hair. They just look like tufts of hair under a microscope. Hair cells send electrical signals to the fish’s brain.

Sound moves through the water and into the fish’s body as a vibration. The vibration hits the ear stones and makes them move. As they move, the hair cells under the ear stones bend. When they bend, they send electrical signals to the brain. The brain uses that signal to understand what sound it’s hearing and where the sound comes from.

Fish also have hair cells on the outside of their bodies. They circle around a fish’s head and eyes. They make a long row down the fish’s side called the **lateral line**. The hair cells of the lateral line are like feelers. As a fish swims, the water can bend those hair cells. That sends a signal to the fish’s brain—just like the hair cells in their ears do. The lateral line helps fish swim in a school. It also helps them detect prey or predators.



This is part of the lateral line. Scientists can use a special dye to make hair cells and their support cells glow when the right kind of line shines on them. Then they can see them under a microscope.

Some fish can hear extra well, thanks to their **swim bladder**. That's a sack of gas in the middle of a fish's body—like a balloon. It helps a fish float or sink depending on how much air is inside it. That's how a fish moves up or down in the water.

Some fish have a connection between their swim bladder and their ears. For them, the swim bladder amps up sound vibrations that hit the ear stones.

"It amplifies their ability to hear—like super hearing," Sholes said.

Maybe that's why tapping bothers my goldfish so much. We can **protect our fish friends** by being careful about the human-made sounds they hear in enclosures and in the wild. Thinking about how we affect other animals and ecosystems helps us all get along swimmingly.

Sincerely,
Dr. Universe

Dr. Universe: Besides telescopes and spaceships, how do we really know that there are other planets? – Ia, 12, Montana

Dear Ia,

I looked through a high-power telescope for the first time in college. I couldn't believe how many stars I saw. It's hard to imagine all the planets orbiting all those stars.

I talked about how we know those planets are out there with my friend **Jose Vazquez**. He's an astronomer at Washington State University.
He told me that scientists look for planets outside our solar system using a number of instruments—like a photometer. That's a tool that attaches to a telescope and measures light.

The sun and eight major planets make up **our solar system**. All the planets outside our solar system are called **extrasolar planets** or exoplanets. Some of them are called hot Jupiters. Exoplanets orbit other stars—just like we orbit the sun.

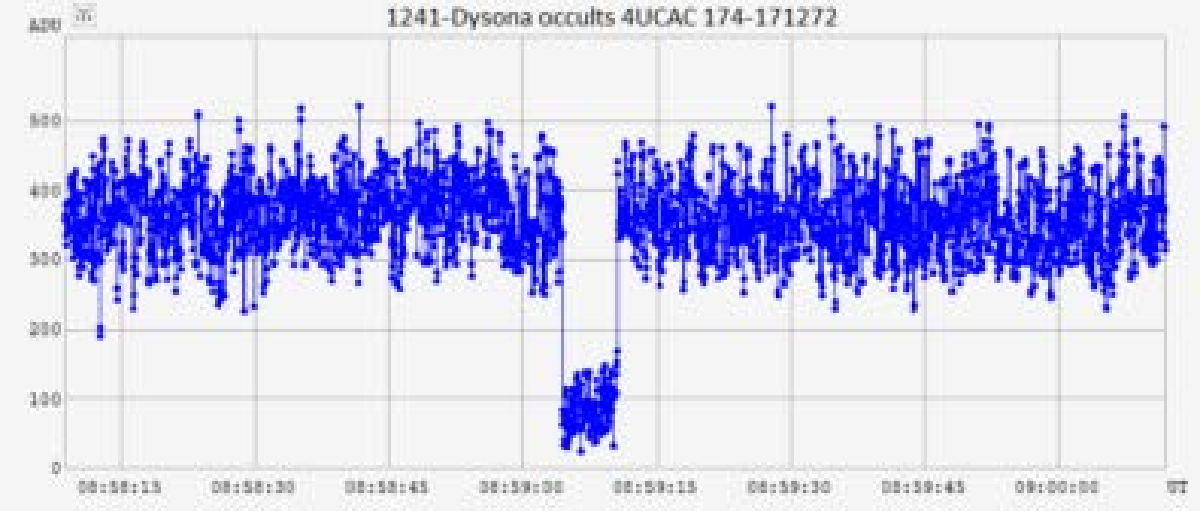
The closest exoplanet is nearly 25 trillion miles away. Scientists can't point a telescope and look directly at a planet that distant. They can't send a rover that far. Instead, they look for clues that a planet is there.

One clue is called a **light curve**. Imagine you're facing a distant star with a planet. As the planet orbits its star, sometimes it will pass between you and the star. The star's light will get dimmer as the planet passes by. Then it will get brighter again.

Scientists measure a star's light using a photometer. They take lots of measurements over time. Then they plot them into a graph called a light curve.

Any time the light dims, there's a dip in the graph. The dip shows when the planet passed in front of the star. Generally, the deeper the dip, the bigger the planet.

Scientists also use a light curve to tell how long it takes the planet to orbit its star. They can even tell how hot the planet is and how thick its atmosphere is.



Here's what a light curve looks like, credit: KuriwaObs

In 2009, NASA wanted to see how many Earth-sized exoplanets they could find. They wanted to learn more about the universe. They wanted to see if there were other planets that could support life.

So, they launched a giant space telescope called **Kepler**. Its main instrument was a photometer. It zoomed around measuring the light from different stars. Then, scientists made light curves and looked for exoplanets.

So far, scientists have found **more than 5,500 exoplanets**. They've found many more possible exoplanets. Scientists are still combing through the Kepler data. Plus, another space telescope called **TESS** took over when Kepler ran out of fuel.

You don't have to be an astronomer to hunt for exoplanets. Anybody can use robot-powered telescopes online to look for planets and other objects in space. Or you can look through the **data from Kepler** yourself.

"The **MicroObservatory Telescope Network** is for anybody who's interested in extrasolar systems," Vazquez said. "With just a few clicks, students can take pictures and try to make contributions to finding these planets."

That's an invitation to do community science that's out of this world.

Sincerely,
Dr. Universe

Get more questions and answers here!

Know a kid with a science question?

Help them submit it for a chance to be featured in a future Q&A.

Submit a question!

Q and A Sessions for the Washington 4-H Horse Program Continue – Now On First Wednesdays!

Have questions about the Washington 4-H horse program? **Our monthly Q and A for leaders, parents, members, and staff will now be meeting on the first Wednesday of each month via Zoom from 6:30 to 7:30 pm. beginning June 7th.**

Zooms are structured around the theme/parameters of horses and youth development. They are more than "what are the rules." There is also time set aside for input on future topics for subsequent Zooms. **The Zoom meeting ID is 452-082-9765 with no passcode**. You must have a zoom account to participate.

The meetings are facilitated by Kim Baker, State 4-H Equine Coordinator.

Feel free to contact Kim with any questions at ***kim.baker@wsu.edu***.
