

#### Tuesday News - May 9, 2023

#### CONTENTS

#### FEATURES

- Grow Your Digital Knowledge and Support The Washington 4-H Tech Changemaker Teens!
  >NEW!<</li>
- Washington State 4-H Teen Conference Registration Closes Soon! Don't Miss Out Register Today! >NEW!<</li>
- State 4-H Ambassadors Present the 4-H Youth of the Month for May! >NEW!<
- Enter the Washington State 4-H Fair Patch Design Contest Closes May 30th!
- Celebrate Pride Month With A 4-H Pride Shirt! >NEW!<
- "Prepare for Fair" Set For May 21st On Zoom!! >NEW!<
- Fifth and Final State 4-H Virtual Photo Club Meeting Scheduled for May 14th; April Meeting Recording Now Available!
- 2023 Washington 4-H State Livestock Judging Contest Update
- Skunk Works 4-H Robotics Club of King County Wins Award at World Championships
- KYG Conference Facilitator Positions Now Open >NEW!<
- 2023 State Horse Bowl Results Reported >NEW!
- 2023 State Hippology Contest Results Report >NEW!<
- Washington State 4-H Fair Manager Tom Gwin Retires

- Practice Horse Judging Contests Available Online!
- Spokane County Extension Hosts Spring Three-Day 4-H Horse Clinic May 12 14
- Registration is Open for the Annual Wahkiakum 4-H Great White Tail Run
- Ask Dr. Universe: Do Insects Have Blood In Their Bodies? >NEW!<
- Ask Dr. Universe: How Did Our Planet Get To Be The One With Breathable Air?
- Dressage Clinic Coming to Franklin County in June!
- Upcoming 4-H Horse Events to be Hosted By Yakima County Extension 4-H
- Announcement of Dressage Tests for the 2023 4-H State Fair
- Reining Pattern for 2023 4-H State Fair Now Available
- Q and A Sessions for the Washington 4-H Horse Program Continue
- March 26th 4-H Market Poultry Zoom Recording Now Available!
- Explore 4-H with WSU Extension Recording Basic 4-H Cat Project
- RECORDING! Backyard Flock-Poultry Housing, Part 2, Chicks 8-28 Weeks
- RECORDING! Backyard Flock-Poultry Housing, Part 1, Chicks 0-8 Weeks
- Remember to Sign Up for 4-H Equine Science and Horsemanship Series Thursdays!!

# Features

### Grow Your Digital Knowledge and Support The Washington 4-H Tech Changemaker Teens!

Please support our *Washington State 4-H Tech Changemaker (TCM)\* Program Teens* today! **Our seven-partner site**\*\* TCM teens have reached more than 2500 Washington citizens, *in person!* 

We are proud of our youth and their work advancing public understanding of the digital world! (Videos are 4-10 minutes long)

- Safe Internet Use and Reliable Websites: <u>https://youtu.be/hHI39u2xP6k</u>
- Video Conferencing: <u>https://youtu.be/cC3YjVhDHDE</u>
- Email Basics: <u>https://youtu.be/bbaRlapk79U</u>
- Password Strength: <u>https://youtu.be/Mm4Q75vWKe8</u> -
- Virtual and Remote World of Work: <u>https://youtu.be/xxlvLJrexNU</u>

Give us THREE more minutes and complete a survey on your impressions of the video(s) you watched!

https://4hcouncil.co1.qualtrics.com/jfe/form/SV\_57pa913cL7N188K

Visit our State 4-H TCM website at: <u>4-H Tech Changemakers | 4-H Youth</u> <u>Development Program | Washington State University (wsu.edu)</u>

\*The funders included Microsoft; Land O' Lakes, Inc.; Tractor Supply, and Verizon. The National 4-H Council administers the project.

\*\*Partner counties include Spokane, Ferry, Whatcom, Chelan, Grays Harbor, the Kalispel Tribal site, & Wahkiakum.

*Gary F. Varrella,* Ph.D. WSU Spokane County Extension Director & 4-H Educator 509-477-2163 (office) 509-435-3369 (cell)

Visit our web page: <u>http://extension.wsu.edu/spokane/4h/</u>

Like 4-H Facebook: *spokane4h* 

Like WSU Extension on Facebook: *wsuextensionspokanecounty* 

# Washington State 4-H Teen Conference Registration Closes Soon! Don't Miss Out - Register Today!



Registration for Washington State 4-H Teen Conference 2023 is closing soon!

For all information on registration, workshops and other details, <u>CLICK HERE</u> for the Teen Conference page!



- Who: Washington 8th–12th grade youth (completed 8th grade by conference) & adult chaperones
- What: A three-day conference with workshops and tours focused on career exploration, college readiness, leadership and life skill development
- Where: Washington State University Pullman Campus



When: June 20-23, 2023

Registration is open now and closes on <u>May 15, 2023</u>. \*Youth do not have to be enrolled in 4-H to attend.

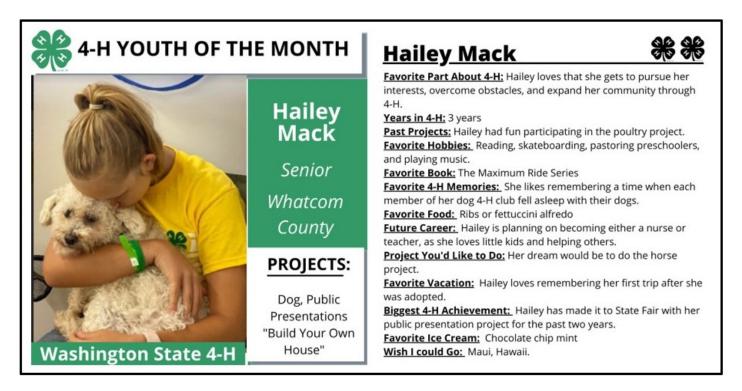
# https://extension.wsu.edu/4h/stc

WSU Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local WSU Extension office. Persons with a disability requiring special accommodation may contact the Whitman County Extension Office at 509-397-6290. Please request the accommodation at least 10 days in advance of the program, otherwise we cannot guarantee availability of the accommodation on site.

Kelly Stewart WSU Extension 4-H Program Coordinator

# State 4-H Ambassadors Present the 4-H Youth of the Month for May!

The Washington State 4-H Ambassadors recognize the 4-H Youth of the Month honoree for May, **Hailey Mack of Whatcom County!** The Ambassadors are proud to highlight 4-H youth monthly throughout the year!



If you have any questions about the State Ambassadors, or are interested in joining, please email <u>wa4hsa@gmail.com</u>. We hope to hear from you!

Enter the Washington State 4-H Fair Patch Design Contest -Contest Closes May 30th!



Live Link: https://extension.wsu.edu/4h/fairs/state-4-h-fair/

# **Celebrate Pride Month With A 4-H Pride Shirt!**

Washington State 4-H PRIDE shirts are for sale through Monday, May 22nd. The shirts will arrive the first week of June, in time for PRIDE Month. All proceeds go to supporting youth programming and community outreach for our State Teen Equity & Inclusion Ambassadors.

https://www.customink.com/fundraising/wa-4-h-pride-23



"Prepare for Fair" Set For May 21st On Zoom!!

**Prepare for Fair** SUNDAY, MAY 21, 2023,2-3:30 PM This virtual workshop is for adult 4-H Volunteers who are in their first couple of years as leaders and may need some help to get their club ready for an area or county fair.

#### **Prepare for Fair!**

We will discuss and share general 4-H fair information for volunteers (club and new superintendents) – how to get your club/project areas ready, entry times (computer/paper) and tags, using your premium/handbook, the fair and essential elements, How to spell F.A.I.R., 4-H Fairs and Competition, youth and preparing them to sell market animals, and will cover many contests and activities. Our intention is to keep this discussion as general as possible and not give specifics for any particular fair (but use examples). We plan to have a State 4-H Fair "How to …" virtual workshop in early June, so that will not be covered specifically. There will be many resources shared out during this virtual presentation.

Pre-register for this Zoom presentation at <a href="https://bit.ly/3LBAyO2">https://bit.ly/3LBAyO2</a>,

After registering, you will receive an e-mail with the Zoom meeting link.

# Fifth and Final State 4-H Virtual Photo Club Meeting Scheduled for May 14th; April Meeting Recording Now Available!



Our 5th meeting theme/focus will be on matting, mounting, fair entries, scorecards, photo labels, and our virtual contest entries. The meeting will be held on Sunday, May 14th at 2:00 PM and will last about 90 minutes.

This fifth State 4-H Photo Virtual Club meeting will be our last one for this year. Instead of a sixth meeting, we will have a virtual photo contest.

Pre-register now at <u>https://bit.ly/3mXnEBX</u> Join us live or view the recordings to learn about our upcoming virtual photo contest.

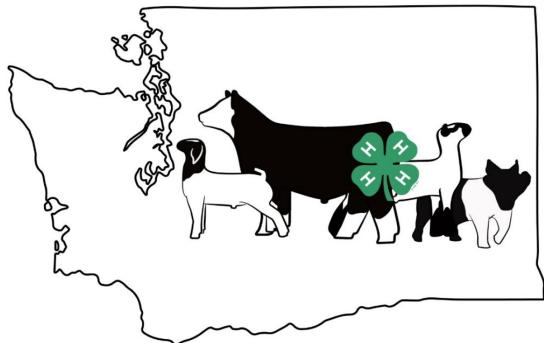
Our fourth meeting, "Action, Stop-Action, Special Effects, and Trick Photography," was held on April 16th. The link for that recording is <u>https://bit.ly/3HgnE70</u>.

Remember that the educational portion from the prior meeting is the photo challenge assignment for the next meeting. If you would like to submit any photos for our critique at the 5th meeting please e-mail them to Pam Watson at <u>pwatson@wsu.edu</u> as attachments by Friday, May 12th, make sure you put in the subject line of the e-mail "4-H Photo Club." Each person may send up to three photos, keep in mind we may not get through them all. For now, keep working on the photo challenge assignment. Our meetings are open to anyone interested in learning more about the 4-H photography project or photography in general. We are trying a new system for capturing data on our post-workshop survey. Please use the link in the video or chat box to take the survey when you finish watching the recording.

Learn something new with us!

Pam Watson, M.Ed. WSU Lewis County Extension 4-H Youth Development Agent, WSU Faculty

# 2023 Washington 4-H State Livestock Judging Contest Update



The 2023 Washington 4-H State Livestock Judging Contest is scheduled for June 24, 2023, and will be held at the Ardell Pavilion, centered on the Grant County Fairgrounds. Contest guidelines and rules with NEW for 2023 updates are linked

in this article and are up for viewing on the Washington 4-H website. Additionally, the travel guidelines document and fillable registration forms specific to Junior, Intermediate and Senior contest registrations are linked below. Again as in 2022, the 2023 contest has NO Requirement for Qualifying, just come and participate.

This will be our second year hosting the Livestock Judging Contest at the Grant County Fairgrounds in Moses Lake, WA. The committee is looking forward to another successful contest year. in 2022 we had three senior teams that traveled to national 4-H contests representing the Evergreen state.

#### <u>New for 2023:</u>

- There will be a registration deadline this year for early registration. June 9, 2023 all registration materials signed by the county extension professional (specialist, educator, coordinator, administrative, etc.) will be due by end of day to qualify for early registration fees (\$15/team; \$5/individual). Late registrations will be accepted with a late fee charged (\$10/individual). All fees (check, credit or cash) will be collected the day of the contest.
- Teams and coaches will need to be prepared to identify the contests they would like to travel to by the end of the state contest. If the first place team has not determined that when asked then they will forfeit first choice and so on. So coaches and parents PLEASE be prepared before you come to the contest to compete.
- Also new will be a dress code (see guidelines appropriate dress). Key no hats, torn or ripped or frayed jeans, no shorts, and no t-shirts with graphics or written sentiments.

Registrations will need to be sent to <u>Robert.kestell@wsu.edu</u> and CC <u>pskuber@wsu.edu</u> by end of day June 9, 2023. Late registrations will be charged a late registration fee. Any questions about the contest? Please contact Paul Kuber <u>pskuber@wsu.edu</u>.

**Document Links**:

2023 Livestock Judging Contest Rules and Guidelines

2023 Livestock Judging Team Travel Guidelines

2023 Livestock Judging Registration Form - Intermediate

2023 Livestock Judging Registration Form - Junior

2023 Livestock Judging Registration Form - Senior

See you on June 24th!



Paul S. Kuber, Ph.D. Associate Professor State 4-H Agri-Science Specialist Northeast Region Livestock and Forage Specialist Washington State University Extension 222 N. Havana St. Spokane, WA 99202 W: 509-477-2185 C: 614-302-1600 pskuber@wsu.edu

# Skunk Works 4-H Robotics Club of King County Wins Award at World Championships

Nancy Baskett

Skunk Works Robotics 4-H Club of King County won an Excellence in Engineering Award at the World Championships held in Houston, Texas in April.

Skunk Works has just wrapped up its competition season. The team did well at its local events and qualified for the district championships in Cheney in early April. In Cheney, the team ranked tenth overall, but took home a blue banner as a member of the winning alliance and also won the Excellence in Engineering award. These achievements earned Skunk Works a spot in the World Championships held in Houston from April 19th through the 22nd. The team competed on the Milstein field and was ranked 32nd – and again won an Excellence in Engineering award.

Skunk Works will hold an Information Night for prospective new members on May 23. More information is available by emailing <u>coach@skunkworks1983.com</u>

The team is pictured below:



#### KYG Conference Facilitator Positions Now Open Dorothy Elsner

Know Your Government Conference Facilitator positions are officially open! Have you thought about joining the team? Click the link posted below to apply!

#### https://forms.gle/1TW5DCR2U9XZvnev6



#### Dorothy Elsner WSU/Skagit County 4-H Program Coordinator 11768 Westar Lane Suite A Burlington WA 98233

Dorothy.elsner@wsu.edu (360) 395-2360

# 2023 State Horse Bowl Results Reported

Kim Baker



Congratulations to the thirty-eight participants from six Counties who participated in the 2023 Washington State 4-H Horse Bowl Contest on May 6th at Grant County Fairgrounds.

Thank you to all the officials for their contributions of time and knowledge in making the Contest possible:

- Ann Vondereau was the Senior Moderator, with Jennifer Leach and Ramona Leber as judges, along with scorekeepers Laura Harding and Miquela Rogers and Timer Carolyn Russo.
- Kim Baker was the Intermediate Moderator, with Julie Hartz as the Judge and Sarah Koll and April Lightner as scorekeepers and Maria Kollin as Timer.
- Special thank you to Carolyn Russo for arranging for such an excellent facility and to Pat Pehling for coordinating an excellent contest!

#### <u>Results:</u>

#### Seniors:

Champion Team - Snohomish Reserve Champion Team - Skagit Third Place Team - Spokane

#### Top Ten Individuals

1st with Gold Medal - Alice Cottrell-Steen - Snohomish 2nd with Silver Medal - Norah Gilbertson - Spokane 3rd with Bronze Medal - Kierstan Dotzauer - Skagit 4th - Claire See - Skagit 5th - Katie Johnson - Snohomish 6th - Rachel Greiner - Skagit 7th - Stella Marsh - Spokane 8th - Lillie Hedge - Snohomish 9th - Hunter McKittrick - Snohomish 10th - Cassidy Pruiett - Skagit

#### Intermediates:

Champion Team - Spokane Reserve Champion Team - Snohomish Third Place Team - Thurston 4th Place Team - Whitman 5th Place Teams - Skagit and Grant

#### Top Ten Individuals:

1st with Gold Medal - Case Friesen - Snohomish 2nd with Silver Medal - Alice McFarlane - Snohomish 3rd with Bronze Medal - Annika Warren - Spokane 4th - Leah Andreassen - Thurston 5th - Kashley Brown - Spokane 6th - Jason Dodge - Spokane 7th - Courtney Lightner - Skagit 8th - Emma Matter - Snohomish 9th - Sophia Belmer - Thurston

10th - Corbin Kuster - Spokane

Of course, the County Coaches deserve recognition for their commitment to serving the youth in their counties to prepare them for and support them in the Contest:

Skagit - Sharrie Nelson and Hannah Brown Snohomish - RA Mazzola, Hannah Kruchek, Erika Kapur and Jaeden Kapur Thurston - Molly Pestinger Spokane - Cheryl Paz, Shannon Lawson and Sarah Gilbertson Whitman - Ashley Alred and Kailub Whitman Grant - Kristen McCrae

# 2023 State Hippology Contest Results Report

Kim Baker



Thirty-six 4-H members representing six counties from around our state competed in the Washington State 4-H Hippology Contest this past weekend at

the Grant County Fairgrounds in Moses Lake. We were so happy to see some new counties giving the contest a try! A huge thank you to Carolyn Russo, Grant County Fairgrounds, and anyone who had a hand in hosting this event! It was the perfect venue.

Many, many volunteers and officials are needed to put on a hippology contest and we appreciate everyone who stepped in to fill all the spots! Thank you!!

Congratulations to all our 4-H contestants! You were amazing!! We hope you had fun, learned some new things while demonstrating what you have learned so far, and are inspired to keep your knowledge base growing! We hope to see you back again next year! And a special thank you to all the coaches!

#### **Senior Results:**

State Champion Team - Snohomish Reserve State Champion Team - Skagit/Thurston 3rd Place Team - Spokane

#### Senior Individual Placings:

Top Individual, Gold Medalist, and High Point Exam – Norah Gilbertson, Spokane Reserve Individual, Silver Medalist, and High Point ID Stations – Madison Erickson-Corp, Snohomish 3rd Place Individual and Bronze Medalist – Kierstan Dotzauer, Skagit 4th Place Individual – Vivian Rice, Snohomish 5th Place Individual – Claire See, Skagit 6th Place Individual – Hannah Wold, Snohomish 7th Place Individual – Saige Bosworth, Spokane 8th Place Individual – Maria Kollin, Thurston 9th Place Individual – Ashleigh Neihart, Snohomish 10th Place Individual – Sophia Lawson, Spokane

#### Intermediate Results:

State Champion Team – Snohomish Reserve State Champion Team – Spokane 3rd Place Team – Thurston 4th Place Team – Skagit 5th Place Team – Whitman 6th Place Team – Grant

#### **Intermediate Individual Placings:**

Top Individual, Gold Medalist, and High Point ID Stations – Emma Matter, Snohomish Reserve Individual, Silver Medalist, and High Point Exam – Case Friesen, Snohomish 3rd Place Individual and Bronze Medalist – Annika Warren, Spokane 4th Place Individual – Alice McFarlane, Snohomish 5th Place Individual – Courtney Leightner, Skagit 6th Place Individual – Jason Dodge, Spokane 7th Place Individual – Sophia Balmer, Thurston 8th Place Individual – Leah Andreassen, Thurston 9th Place Individual – Kashley Brown, Spokane 10th Place Individual – Aerin Cuff, Snohomish

Remember that everyone is welcome to attend our Virtual State Equine Q & A to ask questions about any equine topic, including hippology and horse bowl. Our next meeting is scheduled for May 25th from 6:30 to 7:30 pm. The Zoom meeting ID is 452-082-9765 with no passcode.

You must have a zoom account to participate.

#### Washington State 4-H Fair Manager Tom Gwin Retires Washington State 4-H Fair Board

Tom Gwin, long-time Washington State 4-H Fair Manager, announced his retirement at the April 23rd State Fair Board meeting. He indicated a growing commitment to providing care for ailing family members in his decision to retire. Tom has dedicated many years to making our fair the best experience for our 4-H youth and his in-depth knowledge of fair operations will be greatly missed. His last day will be May 31st; the Board will be arranging for a replacement in the near future.

The original posting of this item incorrectly stated that Tom had resigned the position of State Fair Manager.



# Practice Horse Judging Contests Available Online!

See below about two on-line Practice Horse Judging contests that would be great for your 4-H or FFA Horse Judging teams. Each course is only \$20 with unlimited access for 90 days (from your date of enrollment). Each contest has 6 classes with 2 halter and 4 performance.

There are questions, officials, and critiques at the end of each class.

Follow the links below or QR code to enroll.



Practice Judging 1 Live Link: https://catalog.extension.org/product?catalog=HorseJudgingContest

Practice Judging 2 Live Link: https://catalog.extension.org/product?catalog=1676909671DNE4F



Dr. Kathy Anderson, PhD Professor, Extension Horse Speciist University of Nebraska–Lincoln Animal Science ANSC C-204 Animal Science Lincoln, NE 68583-0908 402-472-6414 Kanderon1@unl.edu Facebook: UNLhorse https://animalscience.unl.edu/horse

Submitted by Jennifer Leach, 4-H Faculty Liaison State Horse Committee

# Spokane County Extension Hosts Spring Three-Day 4-H Horse Clinic May 12 - 14

#### Spokane County Extension invites you to a 4-H Horse Clinic!

Saddle up and get ready for the show season with top notch clinicians. All 4-H youth welcomed. Our large and diverse clinic plans to cover a variety of disciplines: performance, western games, jumping, dressage, and greenhorse.

Our clinic is ideal for both advanced and beginner riders, small size class and affordable rates. We hope to see you in May.

#### 3-day: 4-H Horse Clinic

May 12-14th Spokane County Fair Grounds

Flyer: https://s3.wp.wsu.edu/.../03/Spring-clinic-flyer-2023.pdf

Sign up here: https://forms.office.com/Pages/ResponsePage.aspx...



#### **4-H Horse Spring Clinic**

May 12-14th 2023

Spokane County Fair Grounds

The 4-H Spring Clinic is a perfect opportunity to learn, gain new skills and get ready for the show season with top notch clinicians. For an affordable price. Neighboring 4-H counties welcome. https://extension.wsu.edu/spokane/4h/

• Western Games • Performance • Jumping • Dressage• Green Horse •



Sharon Fouts









Brianna Randal



**Bailey Baurer** 







# Registration is Open for the Annual Wahkiakum 4-H Great White Tail Run!

The 39th Annual Wahkiakum 4-H Great White Tail Run is on Saturday, May 20, 2023. Registration begins at 8:30 am at the Skamokawa Vista Park Office, Run starts at 10:00 am. We have several walk/runs available: 10K, 5K, 2 mile through Julia Butler Hansen National Refuge in Skamokawa, Washington. Participants can register online or via mail with the brochure and t-shirts are available for purchase too!

#### In order to guarantee a t-shirt purchase, you must register by May 5th.

Please contact our run coordinator Carol Ervest with questions, 360-465-2275 or email Lisa Frink, Wahkiakum 4-H Program Coordinator, Ifrink@wsu.edu

We look forward to seeing you soon! #gwtr2023



DATE: Saturday, May 20th, 2023

TIME: Registration begins at 8:30 am; Run at 10 am

**COURSE**: 10K, 5K, 2-mile run/walk through Julia Butler Hansen National Refuge in Skamokawa, Washington

**AWARDS**: Recognition given for overall male and female winners in each event, ribbons for top three finishers in each age division.

**OFFICIAL DOG RULES**: Socialized dogs only. Dogs should be at least 6 months old with current vaccinations. Dogs must be on leash at all times and stay on designated course. Female dogs in season are not permitted.

**REGISTRATION INFORMATION AND LINKS:** Mail in Registration: 2023 4-H GWTR Brochure

Online: <u>https://runsignup.com/Race/WA/Skamokawa/GreatWhiteTailRun</u>

Must register by 5/5/23 to guarantee a shirt. For further information, call: 360-465-2275 or 360-795-3278 The Julia Butler Hansen National Wildlife Refuge, in addition to protecting endangered deer, is also a wintering area for waterfowl on the Pacific flyway. Skamokawa Vista Park has showers, playgrounds, yurts, overnight campsites & RV accommodations. For reservations at this park, call 360-795-8605.

#### Ask Dr. Universe: Do Insects Have Blood In Their Bodies? - Raman, 7, Washington



Do insects have blood in their bodies? - Raman, 7, Washington

Dear Raman,

You probably don't look like an insect. You don't have feelers or wings. You keep your skeleton inside your body instead of on the outside. But what about blood? Do insects have blood like yours?

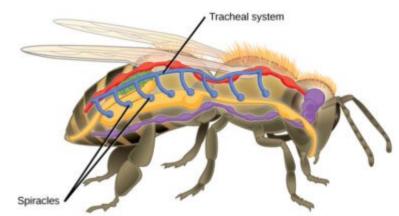
I talked about this with my friend <u>Richard Zack</u>. He's an entomologist at Washington State University.

"Insects have hemolymph," he said. "It's very similar to blood."

Zack told me hemolymph moves differently through the body, and it doesn't do everything blood does.

Humans and other mammals have <u>closed circulatory systems</u>. That means their blood travels in blood vessels. A heart pumps the blood all over the body, and it moves through a network of blood vessels to get there.

As it moves through the body, blood carries things with it. It carries chemical messages called hormones. It carries nutrients. If you get hurt, it carries cells that repair wounds. If germs get into your body, immune cells travel in the blood to fight the germs, so you don't get sick.



Check out this insect's heart (red) and network of air tubes (blue). Credit: CNX OpenStax via WikiCommons CC-BY-4.0

Insects have <u>open circulatory systems</u>. They don't have any blood vessels. Their hemolymph just sloshes around in their bodies. They have a heart, but it's not like yours. It's one long tube along the insect's back. This tube pulls in some of the hemolymph as it sloshes around and pushes it to the front of the insect. There, the hemolymph can pick up hormones and other stuff from the insect's brain. It carries those things with it as it flows freely back through the insect's body. Hemolymph carries hormones, nutrients, and cells for wound repair and germ-fighting—just like human blood does.

But human blood does one more thing. Blood contains a protein called hemoglobin. That protein grabs on to oxygen from the lungs. It carries the oxygen through the network of blood vessels and delivers it to your cells. Hemoglobin contains iron. It's red—and that's why human blood is red.

Hemolymph doesn't contain hemoglobin. It doesn't carry oxygen at all. Instead, insects send oxygen to their cells through <u>tiny air tubes</u>. Insects have openings on each side of their bodies—called spiracles. They open these spiracles to let in air. Each spiracle is linked to a network of air tubes. Oxygen moves through these tubes to get to each cell in the insect's body.

Since they don't have iron-rich hemoglobin, hemolymph isn't red like human blood. Hemolymph contains lots of copper. So, hemolymph is blue green. But that color can change depending on what the insect eats.

"The functions of hemolymph and blood are almost exactly the same," Zack said. "Except for this one biggie: Insect blood doesn't move oxygen. That's a whole different system in insects. But when you think of all the other things that blood does—moves messages through the body, moves nutrients, heals wounds hemolymph does the same things."

It turns out you have a lot in common with insects after all.

Sincerely, Dr. Universe P.S. Did you know goldfish can have surgery? Check out the latest episode of the <u>Ask Dr. Universe</u> podcast to meet a fish veterinarian and learn all about fish medicine.

#### How did our planet get to be the one with breathable air? Jacob, 11, Idaho

Dear Jacob,

When I wake up from a cat nap, I stretch and take a deep breath. It feels good to fill my lungs with oxygen.

But that wasn't always possible on Earth.

I talked about this with my friend <u>Sean Long</u>. He's a geologist at Washington State University.

"The cool thing is the answer has to do with life," Long said. "Early life forms on Earth gave us all the oxygen. They were single-celled bacteria."

Our planet is about 4.5 billion years old. There's been life on Earth for 3.5 billion years. The first life forms were <u>made of just one cell</u>. They were bacteria and their cousins called <u>archaea</u>.

Earth exists inside a bubble of gases—called its <u>atmosphere</u>. It's mostly nitrogen and oxygen now. That oxygen is in the air we breathe. Another kind of oxygen in the atmosphere forms the <u>ozone layer</u>. That's like a shield that protects Earth from some of the sun's energy.

If you took a time machine back to early Earth, you wouldn't be able to breathe. The atmosphere was carbon dioxide, methane and water vapor. There was no oxygen to fill your lungs.

There was no ozone layer either. So, the only safe place to live was underwater. Around 2.5 billion years ago, a new type of bacteria showed up. They were <u>cyanobacteria</u>. Today, cyanobacteria are sometimes called blue-green algae—even though they're not really algae.



Cyanobacteria lived in warm, shallow oceans. They grew in flat layers that covered the sea floor. They became mat- and mound-shaped fossils called <u>stromatolites</u>.

Cyanobacteria figured out how to do **photosynthesis**. They could suck in carbon dioxide from the atmosphere and use it—with water and sunlight—to make sugar. At the end of photosynthesis, they spit out leftover oxygen. It's the same way green plants make energy today.

The oxygen those cyanobacteria spit out began to build up.

"Starting about 2.5 billion years ago, oxygen levels in the atmosphere started to rise and rise because the bacteria were doing so well," Long said. "By about 1.8 billion years ago, oxygen levels were high enough to create an ozone layer."

Eventually, the atmosphere became more like the one we have today. Scientists call the change to an atmosphere with lots of oxygen the <u>Great Oxygenation</u> <u>Event</u>.

That change was a big deal for life on Earth. Thanks to oxygen, life on land would eventually be possible. One day there would be life forms made of lots of cells—like you and me.

It's amazing to think bacteria too tiny to see could change the atmosphere and life on Earth. I guess you're never too small to make a big difference in the world around you.

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!

### Dressage Clinic Coming to Franklin County in June!



Please mark your calendars for a dressage clinic with Abby Welch on June 18th in Franklin County.

The clinic is open to 4-H horse members and is a great way to receive practice and guidance in preparation for the Washington State Junior Horse show.

For more information, contact Sue Duffy, 4-H Horse Superintendent for Benton/Franklin County. Sue's email address is <u>smarieduffy@gmail.com</u>.

Read Abby Welch's Bio HERE

2023 Dressage Show Entry Form is HERE

Entry Form for Dressage Clinic with Abby is <u>HERE</u>

Submitted by Jennifer Leach, State 4-H horse contact.

# Upcoming 4-H Horse Events to be Hosted By Yakima County Extension 4-H

Hay!!! Do you love horses? Upcoming Yakima County horse events at <a href="https://extension.wsu.edu/.../4-h-events/4-h-horse-events/">https://extension.wsu.edu/.../4-h-events/4-h-horse-events/</a>



### Announcement of Dressage Tests for the 2023 4-H State Fair

The dressage tests for English dressage at the 2023 4-H State Fair will be Test 3 for both Training Level 1 and First Level.

Western Dressage has come back for the 2023 4-H State Fair and Test 3 for both Basic Level and Level 1.

4-H horse members will only be able to ride either English Dressage or Western Dressage, but not both, due to time constraints related to arena time.

These tests are available on the respective governing organizations—United States Dressage Federation (USDF) for English (<u>https://www.usdf.org/</u>) and the Western Dressage Association of America for Western dressage (<u>https://www.westerndressageassociation.org</u>)

The Western Dressage Association of America is the governing body for the Washington State 4-H Horse program. The information in the 2015 PNW 4-H Horse Contest guide on page 20 is outdated. In Washington, we do not use the North American Western (NAW) dressage tests.



Submitted by Jennifer Leach, WSU Extension 4-H State Fair Board Staff Liaison. E-mail Jennifer at <u>LeachJ@co.cowlitz.wa.us</u>.

# Reining Pattern for 2023 4-H State Fair Now Available

The 4-H State Fair reining pattern is now posted on the horse page on the WSU 4-H webpage located at <u>https://extension.wsu.edu/4h/projects/animal-science/companion-performance/horse/</u>

Reining will once again be offered at State Fair for Seniors only. The reining pattern is the same as last year to encourage participation since this is only the second year of 4-H reining. And also includes the scoresheet as an educational and judging tool.

There will be additional reining patterns for county level use that are reflective of basic reining and/or introductory reining. More to come next week. For those who do reining-it is a series of circles, stop, back, figure 8, flying changes, roll backs, and/or spins. And based on skill level and/or complexity of the series of movements.

Submitted by Jennifer Leach, Chair of the "Ad Hoc Reining Committee" and 4-H State Fair board 4-H Stafe Liaison. **E-mail Jennifer at <u>LeachJ@co.cowlitz.wa.us</u>.** 

#### Q and A Sessions for the Washington 4-H Horse Program Continue

Have questions about the Washington 4-H horse program? We are planning to have a monthly Q and A for leaders, parents, members, and staff on the third

Thursday of each month via Zoom from 6:30 to 7:30 pm. Zooms will start in February and run at least through June.

There will be no specific topics for this first zoom but will be around the theme/parameters of horses and youth development. It will be more than "what are the rules." However, there will be time set aside for input on future topics for the subsequent Zooms.

The Zoom meeting ID is 452-082-9765 with no passcode. You must have a zoom account to participate.

The meeting will be facilitated by Jennifer Leach, WSU Extension 4-H State Fair Board Staff Liaison. If you need further clarification of the meeting, feel free to contact Jennifer at <u>jleach@wsu.edu</u>



# March 26th 4-H Market Poultry Zoom Recording Now Available!



# Recording- 4-H Market Poultry



From March 26th, 2023

This presentation is for any youth or volunteer who has an interest in market poultry and how to get started.

Brought to you by the WSU Extension 4-H Youth Development Small & Companion Animal Committee

If you are working on a Market Poultry Project and need to get some basics or more advanced info, check out our recording from March 26th, 2023. We covered fryers, turkeys, ducks, and geese, with the focus being on fryers and turkeys. This program is available to all, not just 4-H youth.

Find the link to the recording below. http://bit.ly/3ze4SbT (WSU Zoom Recording)

# Please take our post-workshop survey after viewing the recording at (WSU Qualtrics) this link is also in the recording. <u>http://bit.ly/3LRPppq</u>

Thanks for watching our workshop!

Pam Watson, M.Ed., <u>pwatson@wsu.edu</u> WSU Lewis County Extension 4-H Youth Development Agent, WSU Faculty

# Explore 4-H with WSU Extension Recording – Basic 4-H Cat Project



Explore 4-H with WSU Extension - Recording -Basic 4-H Cat Project

This presentation is for anyone who has an interest in the 4-H Cat Project and how to get you and your cat ready for a 4-H Show. 4-H Volunteer Caroline Vadino presents with us on Explore 4-H with WSU Extension the "Basic 4-H Cat Project" from Sunday, March 5th, 2023. You can find the recording for this presentation at <u>http://bit.ly/3ZIo3Wk</u>.

There is a short survey at the end of the presentation with a link that will take you to a WSU Qualtrics page, please take a few minutes to complete the survey.

Thank you and enjoy the workshop,

Pam Watson, M.Ed. WSU Lewis County Extension 4-H Youth Development Agent, WSU Faculty

> RECORDING! Backyard Flock -Poultry Housing, Part 2, Chicks 8-28 Weeks



Are you thinking about getting chicks? What sort of brooder should you have before you bring them home? Where will they live as they get older? Let's discuss some safe, inexpensive, and healthy designs for your poultry housing. This presentation is for 4-H members, volunteers, families, and anyone from the public who has an interest in small and backyard poultry and how to set up ageappropriate housing.

You can find the second half of the recording "Chicks 8-28 Weeks" at <u>http://bit.ly/3ELEidv</u>

This recorded session of Explore 4-H with WSU Extension is brought to you by the WSU 4-H Small & Companion Animal Committee.

Thanks for watching,

Pam Watson, M.Ed., <u>pwatson@wsu.edu</u> WSU Lewis County Extension 4-H Youth Development Agent, WSU Faculty

# RECORDING! Backyard Flock-Poultry Housing, Part 1, Chicks 0-8 Weeks



Are you thinking about getting chicks? What sort of brooder should you have before you bring them home? Where will they live as they get older? Let's discuss some safe, inexpensive, and healthy designs for your poultry housing. This presentation is for 4-H members, volunteers, families, and anyone from the public who has an interest in poultry and how to set up age-appropriate housing.

You can find the first half of the recording "Chicks 0-8 Weeks" at <u>http://bit.ly/3Eat7uy</u> This recorded session of Explore 4-H with WSU Extension is brought to you by the WSU 4-H Small & Companion Animal Committee.

Thanks for watching,

Pam Watson, M.Ed., <u>pwatson@wsu.edu</u> WSU Lewis County Extension 4-H Youth Development Agent, WSU Faculty

### Remember to Sign Up for 4-H Equine Science and Horsemanship Series Thursdays!!

We are excited to launch the 2022-2023 WA State 4-H Equine Science and Horsemanship Series!! Hosted virtually on the 4th Thursday of the month, December 2022 – December 2023 (\*5th Thursday in November 2023, due to Thanksgiving) from 6:30 – 7:30 pm. All are invited to attend to learn more about horses! Sessions will incorporate hands-on opportunities and fun learning games! Use this link to sign up and receive the zoom link: <u>https://bit.ly/WA4-HEquineScience</u>

Registered participants will be emailed a suggested supply list prior to each session for the hands-on component.

NOTE: Instructors are needed for some of our upcoming sessions. If you have interest in teaching, please contact <u>kim.baker@wsu.edu</u> | 425-520-3908. We are interested in hearing from staff, equine professionals, and alumni of the horse program that would like to share their area of expertise with an audience of youth.

Interested parties should be prepared to share an overview of their topic and how they envision incorporating a hands-on component in a virtual format. More details about the review process are available upon request.

Thank you!

