

copy QR code for viewing. Exhibitors are encouraged to test their codes or links on several devices to check for appropriate permissions for public viewing. Written interviews should be in a notebook. Written reports should be 3 to 5 pages, double spaced, 12-point font, and 1-inch margins. Multimedia reports should be between 3 to 5 minutes in length.

H861005

Robotics Sensor Notebook (Scoresheet SF241)

Write pseudo code which includes at least three sensor activities. Include the code written and explain the code function. Codes can be submitted as a multimedia format uploaded to a cloud sharing service. Include a QR code with your project to allow judging access. Multimedia presentations should be 3 to 5 minutes in length. State Fair qualified videos should be submitted to <https://go.unl.edu/2024nesfset> by August 10. Videos can also be uploaded to a video streaming application and exhibitors MUST provide a hard copy QR code for viewing. Exhibitors are encouraged to test their codes or links on several devices to check for appropriate permissions for public viewing.

H861007

Kit Labeled Robot (cannot be free programmed) and Notebook (Scoresheet SF243)

This class is intended for explorations of robotic components such as arms or vehicles OR educational kits marketed as robots that do not have the ability to be programmed to "sense, plan and act." The exhibit should include a notebook with the robot the youth has constructed. Included in the notebook should be (1) a description of what the robot does, (2) pictures of programs the robot can perform, (3) why they chose to build this particular form, and (4) how they problem solved any issues they might have had during building and programming. A picture story of assembly is recommended. If the robot is more than 15 inches wide and 20 inches tall they may not be displayed in locked cases (at State Fair).

H861008

3D Printed Robotics Parts (Scoresheet SF244)

This class is intended for youth to create parts through 3D printing that help create their robot or aid the robot in completing a coded function. Project should include notebook describing the process used to create the project, describe the success of your designed piece (did it work), intended use of the product and the modifications made to the item.

**H861901

Junk Drawer Robotics Exhibit – Not eligible for State Fair.

**H861902

County Only Robotics Exhibit – This exhibit does not fall into any of the State Fair Classes.

ROPE

Each rope exhibit must be mounted on a board that is 1/4" thick x 24" high x 32" wide. All items placed on boards must be made according to instructions found in the 4-H Rope Manual, E.C. 7-01-79. Either manila or synthetic rope may be used. When halters are exhibited, the tie rope, plus a required second piece of rope must show any three of the following items: 1) end whipping; 2) eye splice; 3) crown splice; 4) rosebud knot; 5) Matthew Walter knot; or 6) diamond knot.

Entries per Individual - One entry per exhibitor per class. Limit of 4 entries per exhibitor per project.

ROPE CLASSES (**Denotes NOT State Fair Eligible)

PREMIUMS: Purple, \$4.00; Blue, \$3.00; Red, \$2.00; and White, \$1.00

**H898901

Rope Display – Scoresheet CF223

At least 10 and not more than 12 knots, hitches, and splices (include two splices) made of 3/8" rope. Include appropriate board title and item labels. The end of all ropes must be whipped.

**H898902

Single Loop or Double Loop Halter – Scoresheet CF70579

Sheep and goats use 3/8" rope. See above requirements for halter exhibits.

**H898903

Single Loop or Double Loop Halter – Scoresheet CF70579

Cattle and horses use 5/8" or 3/4" rope. See above requirements for halter exhibits.

VETERINARY SCIENCE

The purpose of a Veterinary Science exhibit is to inform the public about a common health problem of animals, a veterinary science principle or public health/zoonotic diseases.

RULES:

1. A Veterinary Science exhibit may consist of a poster, notebook, or display. The exhibit may represent material from any of the Veterinary Science projects including entry level exhibits from Unit 1.

2. If photographs are to be part of the exhibit, remember that they will be viewed by the public. Make sure that the photographs used are in good taste and will not be offensive to anyone. Graphic photographs of excessive bleeding, trauma or painful procedures are not appropriate. For exhibits related to veterinary surgical procedures, aseptic techniques need to be shown, for example, use of drapes, use of sterile procedures, wearing of gloves and other appropriate veterinary medical practices.
3. **First-Aid Kits:** Because of public safety concerns and risk of theft of first-aid kit contents (veterinary drugs/equipment) with perceived potential for drug abuse, **animal first aid kits containing any drugs or medications will be immediately disqualified and not displayed. First Aid kits wishing to include medication information should instead utilize written descriptions, photographs, drawings, computer generated printouts or empty packaging of pharmaceuticals.**
4. **Veterinary Science Posters** - This exhibit presents the viewer with a design that is simple and direct, unlike a display that usually presents more information. A poster should not exceed 22 inches x 28 inches and may be either vertical or horizontal.
5. **Veterinary Science Displays** - A display may include but is not limited to: a 3-dimensional exhibit, a scale model, the actual product (for example: skeleton; teeth; samples of leather, fur, or dried skin damaged by disease or parasites) or a notebook. A display is not a poster. A display may be mounted on poster board not to exceed 22 inches x 28 inches or on ¼ inch plywood or equivalent that does not exceed 24 inches high or 32 inches wide or in a three-ring binder or another bound notebook format.
6. Appropriate Veterinary Science Topics:
 - Maintaining health
 - Specific disease information
 - Photographic display of normal and abnormal characteristics of animals
 - Animal health or safety
 - Public health or safety
 - Proper animal management to ensure food safety & quality
 - Efficient and safe livestock working facilities
 - Or a topic of the exhibitors choosing related to veterinary medicine or veterinary science
7. **Remember, since these are science displays, all references and information need to be properly cited.** Proper sources include but are not limited to: Professional journals and publications, professional AVMA accredited websites, interviews with Veterinarians and excerpts from Veterinary Educational Literature. *Plagiarism will result in a disqualification. Please study your topic and present the information to your audience in your own words.*

Entries per Individual - One entry per exhibitor per class. Limit of 4 entries per exhibitor per project.

All static exhibits must have received a purple ribbon at the county fair to advance to the State Fair. Premier 4-H Science Award is available in this area. See General Information for more details.

Scoresheets and additional resources can be found at <https://go.unl.edu/ne4hvetscience>.

VETERINARY SCIENCE CLASSES (Scoresheet SF119)

PREMIUMS: Purple, \$4.00; Blue, \$3.00; Red, \$2.00; and White, \$1.00

H840001 **4-H Veterinary Science Large Animal Poster, Notebook, or Display.**

H840002 **4-H Veterinary Science Small Animal/Pet Poster, Notebook, or Display**

STEM WELDING

This category helps 4-H'ers learn the basics of welding. In addition, 4-H'ers get the opportunity to present their knowledge on the topic and display what they have made. Involvement in STEM Welding gives participants a first-hand experience in a skill that can be used for a lifetime.

RULES:

1. The name and county of each exhibitor should appear separately on the back of each board, poster, or article and on the front cover of the notebooks so owner of the exhibit may be identified if the entry tag is separated from the exhibit.
2. All welds exhibited in class 1 or 2 must be mounted on a 12 inches high x 15 inches long display board of thickness not to exceed 3/8 inch. Attach each weld on a wire loop hinge or equivalent, so the