

does not exceed 24" high or 32" wide or in a three ring binder or another bound notebook format.

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 and quality, efficient and safe livestock working facilities, or a topic of the exhibitors choosing related to veterinary medicine or veterinary science.

**Remember, since these are science displays, all references and information needs 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.

CLASS 1 - 4-H Veterinary Science Large Animal Poster, Notebook or Display. SF

CLASS 2 - 4-H Veterinary Science Small Animal/Pet Poster, Notebook or Display. SF

DEPARTMENT H, DIVISION 850 - AEROSPACE

Premiums: Purple, \$4.00; Blue, \$3.00; Red, \$2.50; White, \$2.00

Youth enrolled in Aerospace 2, 3, or 4 may exhibit in any class within this division.

One entry per each class. The name and county of each exhibitor should appear separately on the back of each board, poster or articles 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.

Reports should be written using the scientific method whenever possible (Background, the Question or hypothesis, what you plan to do and what you did, Method used and observations, Results: what you learned). All reports should be computer generated and enclosed in a clear, plastic cover. The reports should be attached securely to the display.

Several classes require a display board which should be a height of 24 inches and not to exceed 1/4 inch thickness. A height of 24 7/8 inches is acceptable to allow for the saw kerf (width) if two 24 inch boards are cut from one end of a 4 foot by 8 foot sheet of plywood. Nothing should be mounted within 3/4 inch of the top or bottom of the board.

Fabricated board such as plywood, composition board or particle type lumber may be used for demonstration displays.

Demonstration boards should be sanded and finished to improve their appearance. The finish on a demonstration board will be judged as a woodworking exhibit.

Demonstration boards should include an overall title for the display, plus other necessary labeling.

General Instructions - Rockets must be supported substantially to protect the rocket from breakage. Rockets are to be mounted on a base that has dimensions equal or less than 12" x 12" and the base should be 3/4 inch thick (no metal base). If the rocket fins extend beyond the edges of the required base (12" x 12"), then construct a base that is large enough to protect the fins. The base size is dictated by the size of the rocket fins. The base and rocket should be proportionate. The rocket **MUST BE MOUNTED VERTICALLY**. Please do not attach side boards or

backdrops to the display. In addition a used engine or length of dowel pin is to be glued and/or screwed into the board and extended up into the rockets engine mount to give added stability. Rockets must be equipped as prepared for launching, with wadding and parachute or other recovery system. Rockets entered with "live" engines, wrong base size or sideboards will be DISQUALIFIED.

A report, protected in clear plastic cover, must be included describing:

- (1) rocket specification (include original or photo of manufacture packaging stating rocket skill level)
- (2) a flight record for each launching (weather, distance, flight height),
- (3) number of launchings
- (4) flight pictures
- (5) safety (how did you choose your launch site? Document safe launch, preparations and precautions)
- (6) objectives learned and
- (7) conclusions.

The flight record should describe engine used, what rocket did in flight and recovery success. Points will not be deducted for launching, flight or recovery failures described. This includes any damage that may show on the rocket.

Complete factory assembled rockets will not be accepted at the State Fair. At County Fair plastic fins can be entered in class 7. Judging is based upon display appearance, rocket appearance, workmanship, design or capabilities for flight, number of times launched and report. Three launches are required to earn the maximum launch points given on the score sheets. Only actual launches count, misfires will not count towards one of the required three launches.

For self designed rockets only, please include digital recorded copy of one flight. In the documentation please include a description of stability testing before the rocket was flown.

Skill level of project is not determined by number of years in project. Skill level is determined by the level listed on the manufacturing packaging.

4-H rocket project levels are not intended to correspond to National Association of Rocketry model rocket difficulty ratings or levels.

High power rockets (HPR) is similar to model rocketry with differences that include the propulsion power and weight increase of the model. They use motors in ranges over "G" power and/or weigh more than laws and regulations allow for unrestricted model rockets. These rockets are NOT appropriate for 4-H projects and will be disqualified.

Aerospace/Rockets

CLASS 1 - Rocket - Any Skill Level Rocket with wooden fins and cardboard body tubes painted by hand or air brush. SF

CLASS 2 - Aerospace Display - Poster or display board that displays or exemplifies one of the principles learned in the Lift Off project. Examples include: display of rocket parts and purpose, explains the parts of a NASA rocket or shuttle, interview of someone in the aerospace field, or kite terminology. Include notebook containing terminology (definition), and what was learned. Display can be any size up to 28" by 22". SF

CLASS 3 - Rocket - Any Skill level Rocket with wooden fins and cardboard body tubes painted using commercial application for example, commercial spray paint. SF

CLASS 7 - Rocket - Any Skill level Rocket with plastic fins and cardboard body tubes painted using commercial application for example, commercial spray paint.

Self-Designed Rocket

CLASS 4 - Rocket - Any self-designed rocket with wooden fins and cardboard body tubes. SF

Drones

(Anyone enrolled in Aerospace can enter these classes)

CLASS 5 - Drone Poster - Exhibit must be designed to educate yourself and others on one or more of the following topics: drone technologies, uses of drones, the different types of drones, types of training needed to operate drones, and the laws and regulations users must follow. Posters can be any size up to 28" by 22". SF

CLASS 6 - Drone Video - Exhibit must demonstrate how the drone interacts with the outside world. Examples include field scouting, surveying damage from natural disasters, drones used in commercial applications and settings, drones used for structural engineering. Video should not exceed 5 minutes. (Videos need to be submitted to Amy Timmerman at atimmerman2@unl.edu by August 17, 2020 if chosen for State Fair). SF

DEPARTMENT H, DIVISION 860 - COMPUTERS

Premiums: Purple, \$4.00; Blue, \$3.00; Red, \$2.50; White, \$2.00

One entry per each class. The name and county of each exhibitor should appear separately on the back of each poster or article and on the front cover of the notebooks so owner of exhibit may be identified if the entry tag is separated from the exhibit.

Reports should be written using the scientific method whenever possible (Background, the Question or hypothesis, what you plan to do and what you did, Method used and observations, Results: what you learned). All reports should be computer generated and enclosed in a clear, plastic cover. The reports should be attached securely to the display.

Team Entries: To qualify for entry at the Nebraska State Fair team materials entered in Class 8 - Digital Fabrication must clearly be the work of a team instead of an individual and must have at least 50% of all team members enrolled in 4-H. Additionally, all enrolled 4-H members on the team should complete and attach an entry tag to the materials. A supplemental page documenting the individual contributions to the project should be included. The entry will be judged as a team, with all team members receiving the same ribbon placing.

Computer Mysteries - Unit 1

CLASS 15 - Computer Designed Greeting Card - Exhibit will consist of six greeting cards, each for a different occasion/holiday. Cards should be created on 8 1/2" x 11" page using commercially available graphics program and either single color or color printer/plotter. The cards should vary in folds and design. Tell which software program was used. Prefabricated cards from commercially available card programs will NOT be accepted. No theme required. Put cards in some type of protective cover.

CLASS 16 - Internet Exploration - Exhibit will be a notebook consisting of the following: 1) print-out of five web sites, 2) what you liked and did not like about each website and 3) how you