

Section XV-STEAM-Ag Mechanics

Superintendent:

Special Awards:

The Ag Mechanics exhibit area is a new STEM project for 2021. The project is starting with an emphasis on welding and smithing, it will expand as the project area grows. This project allows youth to explore areas of ag mechanics and metallurgy from repairing or repurposing items to the fabrication of new items. The intent is for this program start with foundational areas, some of which youth may already have, and allow them to continue to build on this knowledge becoming more experienced.

- 1.Enrollment requirement for 4-H'ers: STEM-Ag Mechanics (Waived for 2021 Atchison County Fair) Class open youth enrolled in FFA and Scouts.
- 2.Each exhibitor may enter one exhibit per class. Exhibits must have been constructed or repaired during the current 4-H year. Purple ribbon exhibits have an opportunity to showcase at Kansas State Fair.
- 3.Total exhibit dimensions should not exceed 3 feet high, by 3 feet wide, by 3 feet deep. Total exhibit weight may not exceed 150 pounds (movable by a team of 2 people)
- 4.Wheeled exhibits must utilize a breaking mechanism which prevents the exhibit from freely rolling while on display
- 5.Each exhibit must be free-standing or sufficiently supported by an exhibitor supplied support system that is moveable and is part of the total demission's and weight of the exhibit as described previously. Exhibit boards should have a portable and moveable base. No exhibits may be staked to the ground for display.
- 6.Top heavy items should be braced or placed in a stand sufficient to prevent it from toppling over while on display
- 7.Exhibits may not be bound, affixed, attached to the State Fair buildings, except by the superintendent or Extension Staff.
- 8.Painting or spot painting is not allowed on projects after arrival on fairgrounds. If wet paint is detected by judges or superintendents one ribbon placing will be deducted.
- 9.Repair projects having adequate original finish need not be repainted
- 10.Cutting surfaces, such as blades or knives, are to have a protective covering over them to prevent injury. If easy to remove for judging, foam "pool noodles" and multiple layers of cardboard are acceptable.
- 11.Exhibits that include weaponry of any kind will be disqualified. Weaponry is defined as any instrument, possession, or creation, physical and/or electrical that is intended to be used to inflict damage and/or harm to individuals, animal life, and/or property.
12. Safety precaution should be taken If the exhibit is powered by flammable liquids or electric power. If a safety violation is noted by the judges, superintendent, or other staff, the exhibitor's exhibit, at the judges' discretion, will receive a deduction in ribbon placement or a participation ribbon
- 13.Each exhibit must include an Ag Mechanics information packet. Exhibitor required to complete the "4-H STEM Ag Mechanics Exhibit Information Form" which is available from Extension Office or at www.STEM4KS.com. Packet should include the following items:
A) .Bill of materials for the project with associated costs, B) 1 to 5 pages of photos showing work on the exhibit, preferably from a beginning state to final or completed state, C) If appropriate schematics or working drawings relating to the creation/ repair D) If appropriate operating instructions This form must be attached to the outside of a 10" x 13" manila envelope.
14. Additionally, exhibitors may create an optional video (not required) about their project showing its operation and the work they have done. The video should be no longer than 8 minutes and should be placed on a USB drive. Adult guardians must complete the video release included with the exhibit form.
15. Exhibitor divisions will be Level I– Introductory (1-3 years experience), Level 2-Experienced (4-6 years experience), Level 3– Advanced (7-9 years experience) and Level 4-Master (10+ years experience). Check with Extension Office for additional information regarding fair entry and project details. List experience level on entry card.

H1-501-Welding Repair

H1-502-Welding Fabrication

H1-503-Brazing Repair

H1-504-Brazing Fabrication

H1-505-Smithing

H1-506-Other