4134 Rocket designed by exhibitor; not merely a modification of an existing kit. Include original plans.
4135 Scale Model Rocket made from kit, include plans.
4136 Scale Model Rocket designed by exhibitor; not merely a modification of an existing kit. Include original plans and stability testing.
4137 Rocket designed by 2 or more people; not merely a modification of an existing kit. Include original plans.
4138 Mid or high power rocket made from kit or original design
4139 Educational Exhibit

◊ Open Class ◊
4211 Rocket made from kit; include plans.
4212 Rocket designed by exhibitor; not merely a modification of an existing kit. Include original plans.
4213 Rocket designed by 2 or more people; not merely a modification of an existing kit. Include original plans.

STEM UAS
Judging Sunday, July 25; 1:00 p.m.

1. The information that accompanies the UAS must be limited to the 4-H Exhibit Information Form which is affixed to a 10" x 13" envelope. This envelope should NOT be attached to the UAS. It may be downloaded from www.STEM4KS.com.
2. Unmanned Aerial Systems that include or depict weaponry of any kind will be disqualified.
3. If modifications are made to the exhibit, a page should be attached noting those modifications.
4. For anyone interested in exhibiting at Kansas State Fair: Each exhibit must include a video of the youth operating the UAS. This allows judges to get a better understanding of the exhibit and allows the youth the opportunity to fully demonstrate their exhibit. The video should be no longer than 8 minutes and should be placed on a CD, DVD, USB drive, or similar item.
5. For all STEM Educational Exhibits, see rules on page 29.

◊ 4-H Class ◊
4140 UAS designed by exhibitor
4141 Practical Application of UAS from purchased kit - must include UAS, plus video, notebook, poster, display board, etc. This class is separate from educational exhibits. A tangible use would be mapping Russian Olive trees, eroded soils, and bindweed in fields, etc.
4142 Educational Exhibit

◊ Open Class ◊
4214 STEM: Other

STEM Educational Exhibit

1. No additional exhibit information (manila envelope) is required like the other STEM classes.
2. Exhibits must contain substantial supporting educational materials.
3. Educational display boards, posters and notebooks should be creative and showcase details about the knowledge learned in the project during the current 4-H year. Value is placed on youth who can demonstrate how their skills have increased while completing the project. Each exhibit will be judged on uniqueness, creativity, neatness, accuracy of materials, knowledge gained, and content. An exhibit judging score sheet available at: www.STEM4KS.com. For example, a rocket that may have crashed and/or is highly damaged may be made into an educational display or poster that tells a great story with many lessons learned.
4. Follow copyright laws, citing all sources of information in a standard notation. Sources of information must be cited on the front of your exhibit, including all posters and educational display boards.
5. Educational displays are not to exceed a standard commercial 3' x 4' tri-fold display board. No card table exhibits will be allowed. Care should be taken to use durable materials that will withstand Kansas State Fair conditions.
6. “Construction Kits” that are part of Educational displays must be contained in cases (tackle boxes, sealable containers, etc.) that may not be larger than 1' X 2' X 2' and must have a latch which securely keeps all components contained in the “Construction Kits”. Other components are to adhere to appropriate dimensions as stated elsewhere.
7. Educational Project notebooks must be organized in a 3-ring binder.
8. Any three dimensional display exhibits may not be thicker than 1"
9. Engines and igniters for rockets ARE NOT permitted with the exhibit and constitute an immediate disqualification. This is for safety reasons and includes both spent and live engines.
10. Exhibitor’s name, county or district, age, and year(s) in project must be tagged or labeled in a prominent location on the, notebook, and/or “Construction Kit.” For education displays and/or posters the exhibitor’s name, county, or district, age, and year(s) in project must be tagged or labeled on the back of the exhibit. Exhibit cards are not sufficient as they may be removed or repositioned for display. Failure to label an exhibit may result in one ribbon placing deduction.
11. Exhibits should possess the following qualities (in no particular order): a. A central theme b. What you want others to learn c. Be designed & constructed in a manner befitting the exhibit d. Be something you are interested in e. Be related to Astronomy, Computer System, Robotics, Rocketry, or UAS.
12. If a safety violation is noted by the judges, superintendent, or other staff, the exhibit, at the judge’s discretion, will receive a participation ribbon.