ELECTRIC & RENEWABLE ENERGY

Dept. EM

1. An exhibitor may enter up to four articles in this division.
2. Articles that have been in use should be cleaned for exhibit.
3. A sheet of operating instructions must be furnished for any exhibit, which is not self-explanatory.
4. Projects must be operable using only 110 or 120V AC or battery power. If battery power is required, batteries must be furnished.
5. Any project with a complexity of size or electronics must have (a) instructions for assembly and use and (b) equipment available at the time of judging for actual testing of the exhibit.
6. No hand dipped solder may be used on exhibits.
7. Each exhibit must have a scorecard completed and attached securely. Each scorecard is available from the Extension Office or noted below.
8. 4-H members enrolled in 4-H Electric & Ren. Energy for updated County and State Fair guidelines please contact the Extension office or https://www.kansas4-h.org/projects/enginereering-technology/electric-renewable-energy/.

ELECTRICAL AND ELECTRONICS

https://www.kansas4-h.org/events-activities/fairs/kansas-state-fair/docs/energy management/Electric_Scorecards.pdf.
1300 - AC Electric Projects. Electric projects with a 110 or 120 V alternating current (AC) power source. Some project examples are household wiring demonstrations, small appliances extension cords, trouble lights, indoor or outdoor wiring boards, or shop lights. Projects may be a restoration or original construction. The project must be operational and meet minimum safety standards. AC projects must be 110/120 V, no 240 V exhibits are allowed, and must be constructed such that the judges have access to examine the quality and safety of workmanship.
1301 - **DC Electric Projects**. Electric projects with a battery or direct current power source. This class includes electric kits or original projects. This class also includes demonstration DC powered project. Examples include: wiring two- or three-way switches, difference between series/parallel lighting circuits or wiring doorbells switches. All DC electric projects must work with batteries supplied by a 4-H'er. Projects must be constructed such that the judges have access to the quality of wiring workmanship.
1302 - **Electronics Projects**. Electronic projects with a battery or direct current power source. This class includes electronic kits or original projects. Examples include radios, telephones, toy robots, light meters, security systems, etc. May be constructed using printed circuit board, wire wrap, or breadboard techniques. Include instruction/assembly manual if from a kit. Include plans if an original project. Projects must be constructed such that the judges have access to examine the quality of wiring workmanship.
1303 - **Educational Displays and Exhibits**. The purpose of the educational display and exhibit is to educate the viewer about a specific area of the 4-H electrical or electronics project. The display or exhibit should illustrate one basic idea. This class includes any educational displays, exhibits or science fair type projects which DO NOT have a power source, i.e. exhibits, posters or displays of wire types, conduit types, electrical safety, tool or motor parts identification or electrical terminology. Educational displays and exhibits must be legible from a distance of four feet, using a maximum tri-fold size of 3' x 4'.
A Champion and Reserve Champion will be selected in each class as applicable.
Champion and Reserve Champion from these classes will be combined with other Engineering & Tech

Champions to determine an overall Grand Champion and Reserve Grand Champion.