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/.

SMALL ENGINES

All exhibits should involve engines smaller than 25 horsepower for classes 1305-1307. Displays are limited to 4' wide and 4' deep - both upright and floor displays.
https://www.kansas4-h.org/events-activities/fairs/kansas-state-fair/docs/energy management/Small_Engines%20Scorecard.pdf.
1305 - DISPLAY - Exhibit a display, selecting one of the following options: a display identifying different engine or lawn and garden equipment parts or a display showing the function of the various engine or lawn and garden equipment parts; OR a display identifying and explaining the function(s) of different special tools needed for small engine work; OR 3) a display illustrating and providing the results of any one of experiments that are included in the project books. No complete engines, lawn tractors, tillers, chainsaws are permitted for display. Maximum tri-fold size is 3' x 4'.
1306 - MAINTENANCE - Exhibit a display that illustrates either 1) Routine maintenance procedures OR 2) Diagnosing and troubleshooting specific problems in an engine. No complete engines, lawn tractors, tillers, chainsaws, etc. are permitted for display, using a maximum tri-fold size of 3' x 4'.
1307 - OPERATION - Exhibit an operable small engine (no more than 20 HP) overhauled or rebuilt by the member. Include maintenance schedule for the engine and a brief description of steps taken by the member overhauling or rebuilding the engine. Maximum tri-fold size is 3' x 4'. Engine should contain no fuel in tank or carburetor.
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.