

ELECTRIC

Project Description:

The 4-H electricity/electronics program develops project skills such as safe practices, proper use of fuses and circuit breakers, proper lighting and wiring techniques, as well as life skills in the area of decision making, using science and technology, and developing communication skills.

Levels:

Division I

Division II

Division III

Division IV

Division Advanced

Project Guidelines:

NOTE: **Posters and display boards must follow poster rules, Page 20, #15.** The display boards should be 22" x 28" designed so that they can be displayed horizontally. Equipment wiring boards differ from display boards in that they show hands-on wiring techniques (i.e., complete wiring of a light controlled by a three way switch system). Equipment wiring boards should be a maximum of 3' by 3'.

Exhibit Requirements:

Division I: (Getting On Track With Electricity) or (Electric City CD)

Circuit board, safety poster or display board. Circuit board should be approximately 5 ½ x 5 ½ inches. Circuit board should be labeled to identify whether it is parallel or series circuit. Four winners are selected in Division I. The "What I Learned" record sheet is NOT needed for exhibit. (Include batteries with circuit board.) **Complete 2 activities in manual.**

Division II: (Scoring Electricity Through Magnetism)

A magnetic powered flashlight or a poster (see poster rules, Page 20, #15) on a topic described in the manual. **Complete 3 activities in manual.**

Division III: (Working With Electricity)

Complete 3 activities in manual.

Make one of the following:

- Build an extension cord using all new parts.
- Build an incandescent trouble light using all new parts.
- Build a fluorescent trouble light using all new parts.
- Repair an extension cord or trouble light by replacing the cord, plug, connector body or socket handle with a new part(s).
- Create a poster about: (see poster rules, page 20, #15)
 - Wire size
 - Wire type
 - Current carrying capacity
 - The parts of an extension cord or trouble light
 - An important safety-related topic
 - Any topic covered in the Division III manual.

Division IV: (Wiring Around Your Home)

Complete 4 activities in manual.

Upon completing Wiring Your Home you will exhibit one of the following at the fair:

Display board, poster, equipment writing board and/or written report in one of the following areas:

Exhibit one of the following:

- Made or remade lamp

- Display board on any topic covered in manual.
- Poster on any topic covered in this manual. (see poster rules, page 20, #15)

Advanced Division – Exhibit one of the following items. **Complete General Record Sheet.**

- An article or piece of equipment made in one of the following areas of electricity: heating and cooling, lighting, power, or electronics. A card or note explaining the use of the article, the purpose of building it, and the cost should be attached to your exhibit.
- Photographs, charts, and diagrams describing your project in one of the areas (heating and cooling, lighting, power, or electronics) plus a short written report of your project. The exhibit must tell exactly what you have done – circuits, materials, etc. and an explanation of the use, the purpose, and the cost of the project.
- A written report (illustrated if possible) of your project in the areas of consumer buying, better methods, or careers.