

ELECTRICITY Department 23

Check-In: All Classes: Wednesday, 1 - 8 p.m., Exhibition Hall,

Judging: All Classes: Exhibition Hall, Thursday, 8:30 am.
Danish Judging

Department Chairperson: Mike Iselin, 608-445-9367

Superintendents: Ron Rogers 608-886-2046

Eligible 4-H Project Areas: Electricity

Regulations:

1. For safety reasons, please inspect your project at home before use at the Fair.
2. Electric plugs must be the "put together" type.

<u>Premiums:</u>	<u>Blue</u>	<u>Red</u>	<u>White</u>	<u>Pink</u>
Class A	\$1.75	\$1.50	\$1.25	\$1
Class B	\$2	\$1.75	\$1.50	\$1.25
Class C	\$2.25	\$2	\$1.75	\$1.50
Class D	\$3	\$2.50	\$2	\$1.50

CLASS A. Magic of Electricity - Unit 1

- 1) Display of simple switch
- 2) Alternating current display
- 3) Electric question board
- 4) Steady hand tester
- 5) Simple electric attraction and repulsion exhibit
(Securely attach a 3"x5" card explaining how it works.)
- 6) Simple static electrical generator
(Securely attach a 3"x5" card explaining how it works.)
- 7) Display showing wiring in a simple circuit
- 8) Display showing closed/open circuits
- 9) Display on conductors
- 10) Display on magnetism
- 11) Display on electrical energy transferred into motion

CLASS B. Investigating Electricity - Unit 2

- 1) Homemade electric motor
- 2) Display showing a simple step-down transformer
(Securely attach a 3"x5" card explaining how it works.)
- 3) Display of a simple electromagnet
- 4) Simple homemade buzzer
- 5) Display showing circuit diagrams with explanation
- 6) Example of series circuit with explanation
- 7) Example of parallel circuit with explanation
- 8) Momentary Switch
- 9) Three Way Switch
- 10) Display showing a soldered connection
- 11) Rocket Launcher
- 12) Burglar Alarm

CLASS C. Wired for Power - Unit 3

- 1) Poster showing five types of lighting with a written explanation of how this is defined
- 2) Diagram or photographs of electrical improvements made at home
- 3) Wiring layout of your home or other building
- 4) Electrical Tool and Supply Kit
- 5) Display of symbols on wires and cables and their meanings
- 6) Constructed or repaired light - duty extension cord
(Attach a 3"x5" card explaining work performed.)
- 7) Constructed or repaired heavy - duty extension cord
(Attach a 3"x5" card explaining work performed.)
- 8) Constructed or repaired lamp
(Attach a 3"x5" card explaining work performed.)
- 9) Display showing how to replace a switch

CLASS D. World of Electronics - Unit 4

- 1) Display on Soldering Circuit Assembly
- 2) Display on Diodes
- 3) Display on voltage and polarity
- 4) "Blinky" Flasher
- 5) Alarm that activates in the presence of light
- 6) Light Meter
- 7) SCR Intruder Alarm
- 8) 6-8 Watt homemade amplifier with explanation
- 9) 14"x22" poster showing at least 12 common electric symbols

Special Awards:

Miller & Sons Supermarket - Trophy to Champion and Rosette to Reserved Champion of the designated class.

MECHANICAL PROJECTS Department 24

Check-In: All Classes: Wednesday, 1 - 8 p.m., Exhibition Hall

Judging: Exhibition Hall, Thursday, 8:30 a.m., following Electricity. Danish Judging.

Department Chairperson: Mike Iselin, 608-445-9367

Superintendents: Ron Rogers 608-886-2046

Eligible 4-H Project Areas: Rocketry, Bicycling, Engines, Tractors, Aerospace, Geospatial, Robotics, Legos, STEM

Regulations:

1. Posters may not exceed 14"x22".
2. Display may not exceed 3'x3'.
3. Model airplanes and rockets must be made from scratch or kit. No snap together kits allowed. Project must be assembled and painted, ready for "show".
4. Rockets and powered airplanes must be painted and ready to fly. No rocket engines or radio control equipment may be exhibited.
5. Skill Levels: Must have level tag from the kit container as skill levels are determined by the level number on the kit.
6. Judge's decision is final.
7. Model airplane and model rocketry exhibitors are also encouraged to enter Class C.
8. Age categories for Junior and Senior Divisions are as follows: Junior - grades 3 - 7 and Senior - grades 8+.
9. All pre-painted, metal models must be entered in Class M, lots 13 or 30.
10. Legos: Any multi-section lego display must be mounted on a board or panel to allow the display to be moved for judging and display. Maximum size is 3' x 3'.

<u>Premiums:</u>	<u>Blue</u>	<u>Red</u>	<u>White</u>	<u>Pink</u>
Class A-B, D-J, L-N	\$2	\$1.75	\$1.50	\$1.25
Class K	\$2.50	\$2.25	\$2	\$1.50
Class C	\$1.75	\$1.50	\$1.25	\$1

CLASS A. Model Airplanes

Junior Division Lots

- | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>Skill Level</u> |
|-------------------------|----------|----------|----------|---|
| 1) | 2) | 3) | 4) | Rubber band powered model |
| 5) | 6) | 7) | 8) | Small model - under one foot in any direction |
| 9) | 10) | 11) | 12) | Airplane made from a plastic kit |
| 13) | 14) | 15) | 16) | Airplane made from a wood kit |
| (no skill level) | | | | |
| | | | 17) | 14"x22"poster on basic parts of an airplane |