

## ELECTRIC

PROJECT SUPERINTENDENT:	Carol Schmidt, 317-773-6850, dcakschmidt@comcast.net
EXHIBIT CHECK-IN:	Sunday, July 13, 4-6 PM
JUDGING:	Level 1 Monday, July 14, 8:30 AM, Open Judging
	Level 2 Monday, July 14, 9:30 AM, Open Judging
	Level 3 Monday, July 14, 10:30 AM, Open Judging
	Level 4 & Level 5 Monday, July 14, 11 AM, Open Judging
RELEASE:	Tuesday, July 22, 9-11 AM and, 5-7 PM
STATE FAIR ENTRIES:	5 electric exhibits, one per level 1 electronic exhibit, Level 5

### Project Description:

The 4-H electricity/electronics project develops practical 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. More information can be found at <https://extension.purdue.edu/4-H/projects/4-h-project-electric.html>.

### Levels:

- Level 1 (1<sup>st</sup> year in Electric)
- Level 2 (2<sup>nd</sup> year in Electric)
- Level 3 (3<sup>rd</sup> year in Electric)
- Level 4 (4<sup>th</sup> year in Electric)
- Level 5 (5<sup>th</sup> year or more in Electric)

### Exhibit Guidelines:

**Artificial Intelligence (AI) may be used, with parent permission, when creating this exhibit and is to be documented as a reference. A majority of the work to create this exhibit is to be the 4-H member's original work.** All posters, notebooks, and display boards must include a reference list indicating where information was obtained, giving credit to the original author, to complete the 4-H member's exhibit. This reference list should/might include website links, people and professionals interviewed, books, magazines, etc. It is recommended this reference list be attached to the back of a poster or display board, be the last page of a notebook, or included as part of the display visible to the public. A judge is not to discredit an exhibit for the way references are listed.

Posters are to be 22" x 28" and displayed horizontally and placed in a clear plastic sleeve or covered with clear plastic to protect contents. Display boards should be designed to sit on a table using no more than 36" of tabletop space. Space should be left in the lower right hand corner to place an exhibit tag provided by Purdue Extension staff.

Youth are encouraged to complete the activities as instructed in the manual or found on the 4-H Electric web page, <https://extension.purdue.edu/4-H/projects/4-h-project-electric.html>.

### Exhibit Class Guidelines:

#### Electric Level 1 (1<sup>st</sup> year in Electric)

**Recommended to complete two (2) activities in the project manual.**

**Exhibit one(1) article of choice displaying proper wiring techniques, made during the current 4-H program year. It must demonstrate a minimum of five (5) or more of the appropriate level of "Skills to be Attained" items as outlined in the "4-H Electric and Electronic Skills & Knowledge Chart". A completed copy of the "Exhibit Skills & Knowledge Sheet" must accompany the project. Skills sheets are for judging purposes only and will not be returned to the exhibitor.**

### Exhibit Suggestions:

- Circuit board – 6" by 6" of Series/Parallel Circuit
- Electromagnet
- Galvanometer
- Poster board (22" by 28")
- Display (appropriately sized for displayed equipment)
- Notebook/Report that covers any topic that is in the National 4-H Electric Curriculum Electricity Excitement Book 1 or Investigating Electricity Book 2, Purdue Extension website Level 1 activities/project sheets, or from the appropriate level of the Skills & Knowledge Chart. Refer to the Written Report Scorecard, 4-H 824, to determine expected items to be included.

## **Electric Level 2** (2<sup>nd</sup> year in Electric)

### **Recommended to complete three (3) activities in the project manual.**

**Exhibit** one (1) article of choice displaying proper wiring techniques, made during the current 4-H program year. It must demonstrate a minimum of five (5) or more of the appropriate level of "Skills to be Attained" items as outlined in the "4-H Electric and Electronic Skills & Knowledge Chart". A completed copy of the "Exhibit Skills & Knowledge Sheet" must accompany the project. Skills sheets are for judging purposes only and will not be returned to the exhibitor.

### **Exhibit Suggestions:**

- Magnetic Powered Shake Flashlight – with optional display
- Circuit board – 6" by 6" of Series/Parallel Circuit (with modifications if exhibited in Level 1)
- Electromagnet
- Galvanometer
- Electric Motor
- Poster board (22" by 28")
- Display (appropriately sized for displayed equipment)
- Notebook/Report that covers any topic that is in the National 4-H Electric Curriculum Electricity Excitement Book 1 or Investigating Electricity Book 2, Purdue Extension website Level 2 activities/project sheets, or from the appropriate level of the Skills & Knowledge Chart. Refer to the Written Report Scorecard, 4-H 824, to determine expected items to be included.

## **Electric Level 3** (3<sup>rd</sup> year in Electric)

### **Recommended to complete three (3) activities in the project manual.**

**Exhibit** one (1) article of choice displaying proper wiring techniques, made during the current 4-H program year. It must demonstrate a minimum of five (5) or more of the appropriate level of "Skills to be Attained" items as outlined in the "4-H Electric and Electronic Skills & Knowledge Chart". A completed copy of the "Exhibit Skills & Knowledge Sheet" must accompany the project. Skills sheets are for judging purposes only and will not be returned to the exhibitor.

### **Exhibit Suggestions:**

- Wiring Project - (i.e. extension cord, trouble light, wire sizes and uses, plug configurations, test equipment, replace cord/cord end on a tool or piece of equipment, etc.)
- Electrical tool and supply kit
- Poster board (22" by 28")
- Display (appropriately sized for displayed equipment)
- Notebook/Report that covers any topic that is in the National 4-H Electric Curriculum Wired for Power Book 3, Purdue Extension website Level 3 activities/project sheets, or from the appropriate level of the Skills & Knowledge Chart. Refer to the Written Report Scorecard, 4-H 824, to determine expected items to be included.

## **Electric Level 4** (4<sup>th</sup> year in Electric)

### **Recommended to complete four (4) activities in the project manual.**

**Exhibit** one (1) article of choice displaying proper wiring techniques, made during the current 4-H program year. It must demonstrate a minimum of five (5) or more of the appropriate level of "Skills to be Attained" items as outlined in the "4-H Electric and Electronic Skills & Knowledge Chart". A completed copy of the "Exhibit Skills & Knowledge Sheet" must accompany the project. Skills sheets are for judging purposes only and will not be returned to the exhibitor.

### **Exhibit Suggestions:**

- Wiring - Wire a lamp. The lamp can be a re-wired lamp or one that is built new.
- Electrical tool and supply kit
- Poster board (22" by 28")
- Display (appropriately sized for displayed equipment)
- Notebook/Report that covers any topic that is in the National 4-H Electric Curriculum Wired for Power Book 3, Purdue Extension website Level 4 activities/project sheets, or from the appropriate level of the Skills & Knowledge Chart. Refer to the Written Report Scorecard, 4-H 824, to determine expected items to be included.

## **Electric Level 5** (5<sup>th</sup> year or more in Electric)

**Exhibit** one (1) article of choice, displaying proper wiring techniques, made during the current 4-H program year that demonstrates a minimum of five (5) or more of the appropriate level of "Skills to be Attained" items as outlined in the "4-H Electric and Electronic Skills & Knowledge Chart". A completed copy of the "Exhibit Skills & Knowledge Sheet" must accompany the project. Skills sheets are for judging purposes only and will not be returned to the exhibitor.

## **Exhibit Suggestions:**

- Equipment Wiring - Including but not limited to: parts identification, appliance repair, lamps and other lighting, equipment wiring, control system, security system, topic that covers safety, motors/generators, electric heating, heat pumps, AC, water heaters, and other electric equipment.
- Home Wiring - Included but not limited to any circuits found in the wiring of a house or “barn”, service entrance, switching, receptacles, generator transfer circuit, safety, electrical math, and others.
- Electronic Equipment - Any project or kit containing transistors or integrated circuits or vacuum tubes such as radio, TV, computer, robot, cell phone, and others.
- Poster board (22” by 28”)
- Display (appropriately sized for displayed equipment)
- Notebook/Report that covers any topic that is in the National 4-H Electric Curriculum Entering Electronics, Purdue Extension website Level 5 activities/project sheets, or from the appropriate level of the Skills & Knowledge Chart. Refer to the Written Report Scorecard, 4-H 824, to determine expected items to be included.
- Video Presentation - Create a video showing the work accomplished and skills learned. This video should include the same type of information as required in written notebook listed above. This video is to be no more than ten (10) minutes in length and formatted as MP<sub>4</sub> and submitted on a thumb drive. This video can also be uploaded to a YouTube account with the video being made public and the link submitted for evaluation.