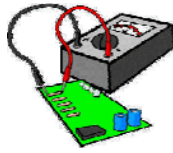


# DEPT. 23 – ELECTRICITY

## JUNIOR DIVISION



**Superintendent:** Louise Dahlke (920) 863-6806

<b>Entry Closing Date:</b>	June 15 <sup>th</sup>	<b>Arrival:</b>	Tuesday, 1:00 – 5:00 p.m.
<b>Judging (Face-to-face):</b>	Tuesday, 1:00 – 5:30 p.m.	<b>Release:</b>	Sunday, 6:00 p.m.

*IN ADDITION TO THE RULES LISTED BELOW, PLEASE REFER TO ALL THE RULES AND REGULATIONS LISTED IN THE FRONT SECTION OF THIS BOOK.*

### **GENERAL RULES:**

1. **Batteries:** Exhibits must be complete with batteries where needed.
2. **Exhibitor Requirement:** Exhibitors must be enrolled in the Electricity project or doing similar work in another youth organization in order to exhibit/show.
3. **Grounding:** Cords and trouble lights must be grounded.
4. **Posters:** All posters must be no larger than 14" x 22" and displays must be no larger than 36" x 36".
5. **Safety Standards:** All entries must comply with current OSHA safety standards.

### **CLASS A – MAGIC OF ELECTRICITY**

<b>PRIZE MONEY:</b>	<b>1<sup>st</sup> - \$2.00</b>	<b>2<sup>nd</sup> - \$1.75</b>	<b>3<sup>rd</sup> - \$1.50</b>	<b>4<sup>th</sup> - \$1.25</b>
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#### **LOT NO.**

- |  |                                       |
|--|---------------------------------------|
| 1. Circuit with Two Batteries & One Light Bulb | 5. Galvanometer                       |
| 2. Compass                                     | 6. Homemade flashlight                |
| 3. Electric motor                              | 7. Simple switch                      |
| 4. Electromagnet                               | 8. Any other exhibit not listed above |

### **CLASS B – INVESTIGATING ELECTRICITY**

<b>PRIZE MONEY:</b>	<b>1<sup>st</sup> - \$2.00</b>	<b>2<sup>nd</sup> - \$1.75</b>	<b>3<sup>rd</sup> - \$1.50</b>	<b>4<sup>th</sup> - \$1.25</b>
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#### **LOT NO.**

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| 1. Burglar Alarm                     | 6. Series Circuit                     |
| 2. Circuit Diagrams with Explanation | 7. Soldered Connection                |
| 3. Momentary Switch                  | 8. Three-way Switch                   |
| 4. Parallel Circuit                  | 9. Any other exhibit not listed above |
| 5. Rocket Launcher                   |                                       |

## **CLASS C – WIRED FOR POWER**

**PRIZE MONEY:**      1<sup>st</sup> - \$2.25      2<sup>nd</sup> - \$2.00      3<sup>rd</sup> - \$1.75      4<sup>th</sup> - \$1.50

### **LOT NO.**

1. Chart showing the electrical usage of appliances
2. Display of light bulbs and the jobs they do best
3. Display of symbols on wires and cables and their meanings
4. Electrical tool and supply kit
5. Poster on how to read an appliance nametag
6. Poster on how to replace a switch
7. Any other exhibit not listed above

## **CLASS D – WORLD OF ELECTRONICS**

**PRIZE MONEY:**      1<sup>st</sup> - \$3.00      2<sup>nd</sup> - \$2.50      3<sup>rd</sup> - \$2.00      4<sup>th</sup> - \$1.50

### **LOT NO.**

1. Display of at least 6 electronic parts and their purpose
2. Display of different kinds of resistors
3. Homemade Capacitor Flasher and Study Circuit
4. Homemade Crystal Radio
5. Homemade Electronic Organ
6. Homemade Photoelectric Controller
7. Homemade Radio Broadcaster
8. Homemade Repulsing Coil to demonstrate magnetic effect
9. Homemade Simple Computer
10. Homemade Simple Microphone
11. Homemade Simple Vacuum Tube Amplifier
12. Homemade Tachometer
13. Homemade Two-Transistor Radio
14. One-transistor Amplifier for use with a Crystal Radio
15. Poster Demonstration on Resistor Color Code
16. Poster showing graph of several cycles of alternating current with description of the meanings of the terms: frequency, polarity and amplitude
17. Any other exhibit not listed above

## **CLASS E – BEHIND THE SWITCH**

**PRIZE MONEY:**      1<sup>st</sup> - \$2.50      2<sup>nd</sup> - \$2.25      3<sup>rd</sup> - \$2.00      4<sup>th</sup> - \$1.50

### **LOT NO.**

1. Any piece of Homemade Solar Equipment
2. Your *Personal Research Results* Book of Ways your Local Power Supplier Supplies our Power
3. Demonstration on How Electricity is Induced in a Conductor by Magnetism
4. Poster or Display on Basic Safety Rules to Follow Around Electric Lines
5. Poster or Display on the Different Sources of Energy Found in your Community
6. Poster or Display on Ways to Save Energy
7. Poster or Display Showing How to Read an Electric Meter
8. Any other exhibit not listed above