DEPT. 23 – ELECTRICITY

JUNIOR DIVISION



Superintendent: Mike Van Deurzen

336-0520

Christian Wagner

Entries Due: July 15th **Arrival:** Tuesday, 1:30 – 5:30 p.m.

Judging (Face-to-face): Tuesday, 1:30 - 6:00 p.m.

Release: Sunday, 6:00 p.m.

IN ADDITION TO THE RULES LISTED BELOW, PLEASE REFER TO <u>ALL THE RULES AND REGULATIONS</u> 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.

DIVISION 183 – MAGIC OF ELECTRICTY

| PREMIUMS FOR DIVISION 183: | 1 st | 2 nd | 3 rd | 4 th |
|----------------------------|-----------------|-----------------|-----------------|-----------------|
| | \$2.00 | \$1.75 | \$1.50 | \$1.25 |

CLASS NO.

- 1. Circuit with Two Batteries & One Light Bulb
- 2. Compass
- 3. Electric motor
- 4. Electromagnet

- 5. Galvanometer
- 6. Homemade flashlight
- 7. Simple switch
- 8. Any other exhibit not listed above

DIVISION 184 – INVESTIGATING ELECTRICITY

| PREMIUMS FOR DIVISION 184: | 1 st | 2 nd | 3 rd | 4 th |
|----------------------------|-----------------|-----------------|-----------------|-----------------|
| | \$2.00 | \$1.75 | \$1.50 | \$1.25 |

CLASS NO.

- 1. Burglar Alarm
- 2. Circuit Diagrams with Explanation
- 3. Momentary Switch
- 4. Parallel Circuit
- 5. Rocket Launcher

- 6. Series Circuit
- 7. Soldered Connection
- 8. Three-way Switch
- 9. Any other exhibit not listed above

DIVISION 185 – WIRED FOR POWER

| PREMIUMS FOR DIVISION 185: | 1 st | 2 nd | 3 rd | 4 th |
|----------------------------|-----------------|-----------------|-----------------|-----------------|
| | \$2.50 | \$2.25 | \$2.00 | \$1.50 |

CLASS 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

DIVISION 186 – WORLD OF ELECTRONICS

| PREMIUMS FOR DIVISION 186: | 1 st | 2 nd | 3 rd | 4 th |
|----------------------------|-----------------|-----------------|-----------------|-----------------|
| | \$3.00 | \$2.50 | \$2.00 | \$1.50 |

CLASS 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

DIVISION 187 – BEHIND THE SWITCH

| PREMIUMS FOR DIVISION 187: | 1 st | 2 nd | 3 rd | 4 th |
|----------------------------|-----------------|-----------------|-----------------|-----------------|
| | \$2.50 | \$2.25 | \$2.00 | \$1.50 |

CLASS 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
- 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