



# ELECTRICITY – UNITS 1 & 2

## A check list for evaluating 4-H electricity exhibits

Name: \_\_\_\_\_ County: \_\_\_\_\_ Rating: \_\_\_\_\_

Circle appropriate unit level:

Unit 1

Unit 2

Directions: Check the appropriate column. Comments are helpful to the presenter.

| Criteria  | Very Good | Improvement Needed |      |
|---|-----------|--------------------|------|
|   |           | Some               | Much |
| <b>Workmanship</b>  |           |                    |      |
| A. Wires properly routed and secured  |           |                    |      |
| B. Wire-to-wire connections, have proper size squeezed connector or have proper terminal connection |           |                    |      |
| C. Screws & mechanical connections properly tightened.  |           |                    |      |
| D. Polarization & color coding of wiring followed   |           |                    |      |
| E. Neatness   |           |                    |      |
| F. Appliance works properly*  |           |                    |      |
| G. *If not, documentation of problems explained   |           |                    |      |
| <b>Safety</b>   |           |                    |      |
| A. Purchased materials & devices appropriate & safe for project                                     |           |                    |      |
| B. Project is safe & appropriate for intended use   |           |                    |      |
| <b>Knowledge</b>  |           |                    |      |
| A. Concepts presented   |           |                    |      |
| B. Skills learned & possible improvements   |           |                    |      |
| <b>Exhibit Presentation</b>   |           |                    |      |
| A. Follows exhibit requirements   |           |                    |      |
| B. Written report clear, neat & demonstrates knowledge, understanding & applications of concepts    |           |                    |      |
| C. Clean, neat, attractive  |           |                    |      |

Overall Comments:



# ELECTRICITY – UNIT 3

## A check list for evaluating 4-H electricity exhibits

Name: \_\_\_\_\_ County: \_\_\_\_\_ Rating: \_\_\_\_\_

Directions: Check the appropriate column. Comments are helpful to the presenter.

| Criteria   | Very Good | Improvement Needed |      |
|--|-----------|--------------------|------|
|  |           | Some               | Much |
| <b>Workmanship</b>   |           |                    |      |
| A. Proper wire size & type for load  |           |                    |      |
| B. Wires properly routed & secured   |           |                    |      |
| C. Wiring protected from sharp edges.  |           |                    |      |
| D. Wire-to-wire connections soldered properly, have proper size squeezed connector or have proper terminal connection. |           |                    |      |
| E. Weatherproof devices & connectors use if item is used outside or in damp location                                   |           |                    |      |
| F. Wires in plugs, connector bodies, receptacles & switches properly covered to prevent contact with bare wires        |           |                    |      |
| G. Screws & mechanical connections properly tightened  |           |                    |      |
| H. Polarization & color coding of wiring followed  |           |                    |      |
| I. Neatness  |           |                    |      |
| J. Appliance works properly*   |           |                    |      |
| K. *If not, documentation of problems explained  |           |                    |      |
| <b>Safety</b>  |           |                    |      |
| A. Electrical devices & metal components grounded  |           |                    |      |
| B. Material & devices are U.L. approved  |           |                    |      |
| C. Purchased materials & devices appropriate & safe for project  |           |                    |      |
| D. Project is safe & appropriate for intended use  |           |                    |      |
| <b>Knowledge</b>   |           |                    |      |
| A. Concepts presented  |           |                    |      |
| B. Skills learned & possible improvements  |           |                    |      |
| <b>Exhibit Presentation</b>  |           |                    |      |
| A. Follows exhibit requirements  |           |                    |      |
| B. Written report clear, neat & demonstrates knowledge, understanding & applications of concepts                       |           |                    |      |
| C. Clean, neat, attractive   |           |                    |      |
| Overall Comments:  |           |                    |      |

## General Judging Criteria for Electrical Projects

1. Inspect for the wire wrapping around the screw in the direction that the screw tightens down.
2. When using stranded wires, check to be sure that all strands are under the screw head.
3. Select the proper wire type and size for the particular load that the project requires.
4. Use weatherproof equipment and connections for all projects that will be used outside or in a damp location.
5. All terminals and connections that utilize household voltages should be enclosed.  
(Examples: Dead-front plugs and receptacles, all connections in electrical boxes.)
6. Connections: Wire-to wire connections must be soldered and taped OR have proper size wire-nut OR squeezed connector.
7. Wiring shall be protected from all sharp edges by any effective means. (Examples: Grommets, silicone seal, etc.).
8. Ground: All electrical materials and metal parts must be grounded.
9. All electrical materials and equipment should be U.L. approved.
10. Where necessary, incorporate over-current protection into the project.
11. Use proper color-coding and polarization for conductors using black for positive and white for negative (DC) or neutral (AC).
12. Use 6V or 12V for Unit Level I & II and 120V for Unit Level III.

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UNIVERSITY OF ILLINOIS  
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College of Agricultural, Consumer and Environmental Sciences



# ELECTRONICS

## A check list for evaluating 4-H electronics exhibits

Name: \_\_\_\_\_ County: \_\_\_\_\_ Rating: \_\_\_\_\_

Directions: Check the appropriate column. Comments are helpful to the presenter.

| Criteria   | Very Good | Improvement Needed |      |
|--|-----------|--------------------|------|
|  |           | Some               | Much |
| <b>Workmanship</b>   |           |                    |      |
| A. Wires properly routed & secured   |           |                    |      |
| B. Wire-to-wire connections soldered properly, have proper size squeezed connector or have proper terminal connection. |           |                    |      |
| C. Screws & mechanical connections properly tightened  |           |                    |      |
| D. Polarization & color coding of wiring followed  |           |                    |      |
| E. Neatness  |           |                    |      |
| F. Appliance works properly*   |           |                    |      |
| G. *If not, documentation of problems explained  |           |                    |      |
| <b>Safety</b>  |           |                    |      |
| A. Purchased materials appropriate & safe  |           |                    |      |
| B. Safety features in place, working   |           |                    |      |
| C. Project is safe & appropriate for intended use  |           |                    |      |
| <b>Knowledge</b>   |           |                    |      |
| A. Concepts presented  |           |                    |      |
| B. Skills learned & possible improvements  |           |                    |      |
| <b>Exhibit Presentation</b>  |           |                    |      |
| A. Follows exhibit requirements  |           |                    |      |
| B. Written report clear, neat & demonstrates knowledge, understanding & applications of concepts                       |           |                    |      |
| C. Clean, neat, attractive   |           |                    |      |

Overall Comments: