## **ELECTRICITY**





**ELECTRICITY 1, 2, 3, or 4** 

Name	<del></del>
County	Project Level 1   2   3   4

JUDGES: Please identify a numerical score on a scale of 1-10 for each element on the sheet.

Judging Criteria	SCORE 1= needs improvement 10= exceeds criteria
Project Knowledge	
General knowledge of electricity project	
Exhibit appropriate for member age & level	
<ul> <li>Uses battery power for Level 1 &amp; 2; 120V for Level 3. Uses U.L. approved electrical material/equipment. No paperclips, thumbtacks, cardboard, or brads.</li> </ul>	
<ul> <li>Use of Wire- Proper wire type and size for the particular load; proper fastening techniques at terminals/connections; properly colored wires (i.e. black/red as hot, white as neutral; etc.)</li> </ul>	
<ul> <li>Terminals/Connections – (as applicable)</li> <li>Proper fastening techniques and locations;</li> <li>Use of weatherproof or watertight equipment and connections for any project to be used outside or in damp areas; etc.</li> <li>All terminals and connections using 120 household voltage are enclosed (such as dead-front plugs and receptacles, all connects to be inside electrical boxes)</li> <li>AC connection choices include: wire to wire connections must be soldered and taped, or</li> <li>Use proper size wire-nut, or use a squeezed connector</li> </ul>	
<ul> <li>Score on Level I Only – basic knowledge of simple switch, circuit, electromagnet, galvanometer, and/or electric motor</li> </ul>	
<ul> <li>Score on Level II Only – basic knowledge of parallel and series circuits; 3-way or 4-way switches; or electrical device displayed</li> </ul>	
<ul> <li>Score on Level III Only – Incorporates AC over-current protection (fuses or circuit breakers) where needed;</li> <li>Ground: All electrical materials, parts, and equipment that are not intended to carry current are grounded by use of a ground wire (connected to a threaded ground screw or wiring clip or grounding lug)</li> </ul>	

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•	Score on Level 4 only – explain the use of any advanced electrical solid-state systems in your project beyond Level 3. Examples are use of diodes, LED's, transistors, resisters, capacitors, or photocells.	
Explana	ation of Project Exhibit	
•	Goal of project exhibit and skills learned	
•	Self-evaluation of project, including time spent on project and ability to explain decisions made or results shown	
Exhibit	Presentation	
•	Neat appearance and exhibit presented in an interesting way	
•	Follows exhibit requirements	
TOT	AL SCORE – 130 points possible	
COIV	IMENTS	
AWA	ARD RECEIVED (if applicable)	