

# ELECTRICITY

## ELECTRICITY 1, 2, 3, or 4



**Illinois Extension**  
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

Name \_\_\_\_\_

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.*

<b>Judging Criteria</b>	<b>SCORE</b> 1= needs improvement 10= exceeds criteria
<b>Project Knowledge</b>	
<ul style="list-style-type: none"><li>• General knowledge of electricity project</li></ul>	
<ul style="list-style-type: none"><li>• Exhibit appropriate for member age &amp; level</li></ul>	
<ul style="list-style-type: none"><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 style="list-style-type: none"><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 style="list-style-type: none"><li>• Terminals/Connections – (as applicable)<ul style="list-style-type: none"><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></ul>AC connection choices include: wire to wire connections must be soldered and taped, or Use proper size wire-nut, or use a squeezed connector</li></ul>	
<ul style="list-style-type: none"><li>• Score on Level I Only – basic knowledge of simple switch, circuit, electromagnet, galvanometer, and/or electric motor</li></ul>	
<ul style="list-style-type: none"><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 style="list-style-type: none"><li>• Score on Level III Only – Incorporates AC over-current protection (fuses or circuit breakers) where needed; 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>	

<ul style="list-style-type: none"> <li>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, resistors, capacitors, or photocells.</li> </ul>	
<b>Explanation of Project Exhibit</b>	
<ul style="list-style-type: none"> <li>Goal of project exhibit and skills learned</li> </ul>	
<ul style="list-style-type: none"> <li>Self-evaluation of project, including time spent on project and ability to explain decisions made or results shown</li> </ul>	
<b>Exhibit Presentation</b>	
<ul style="list-style-type: none"> <li>Neat appearance and exhibit presented in an interesting way</li> </ul>	
<ul style="list-style-type: none"> <li>Follows exhibit requirements</li> </ul>	
<b>TOTAL SCORE – 100 points possible</b>	
<b>COMMENTS</b>	
<b>AWARD RECEIVED</b> <i>(if applicable)</i>	