

# Waukesha 4-H Project Guide



**Extension**  
UNIVERSITY OF WISCONSIN-MADISON  
WAUKESHA COUNTY



Category: Mechanical Sciences  
4/2021

<p>4-H Project <b>Electricity</b></p>	<p>Subprojects under this project</p> <ul style="list-style-type: none"> <li>•</li> </ul>
<p>Things you might learn in this project:</p>	<ul style="list-style-type: none"> <li>• Understand how to use electricity and Identify electrical materials</li> <li>• Wire a simple circuit; build a compass, flashlight, switch, electric motor.</li> <li>• Learn to read circuit diagrams</li> <li>• Build a circuit and measure voltages</li> <li>• Develop a basic electrical tool and supply kit</li> <li>• Understand the symbols on wires and cables</li> <li>• Locate your home wiring system</li> <li>• Identify electrical and electronic parts and devices</li> <li>• Learn how to solder and prepare parts for assembly</li> <li>• Assemble a circuit using a transistor</li> <li>• Poster on career path for an electrician</li> </ul>
<p>Learning activities/ workshops/ field trip ideas:</p>	<ul style="list-style-type: none"> <li>• Interview an electrician</li> <li>• Visit an electrician training facility</li> <li>• Interview a WE Energies employee</li> </ul>
<p>Ideas of things you might exhibit in the fair:</p>	<ul style="list-style-type: none"> <li>• Circuit board – 6” by 6” of Series/Parallel Circuit</li> <li>• Electromagnet</li> <li>• Galvanometer</li> <li>• Magnetic Powered Shake Flashlight – with display</li> <li>• Electric Motor</li> <li>• Wiring Project – (ie. extension cord, trouble light, wire sizes and uses, plug configurations, test equipment, etc.)</li> <li>• Electrical tool and supply kit</li> <li>• Question board or electronic game</li> <li>• Homemade motor, buzzer, circuit tester,</li> <li>• Lamp, extension cord, fuse display</li> <li>• Poster or Display on elements of electrical engineering</li> </ul>
<p>Waukesha County Project Leaders:</p>	<ul style="list-style-type: none"> <li>• King, Kevin                      262-706-3570</li> <li>•</li> </ul>
<p>References &amp; Resource links:</p>	<ul style="list-style-type: none"> <li>• <a href="https://fyi.extension.wisc.edu/wi4hprojects/mechanical-sciences/electricity/">https://fyi.extension.wisc.edu/wi4hprojects/mechanical-sciences/electricity/</a></li> <li>• <a href="https://4-h.org/parents/curriculum/electricity-3/">https://4-h.org/parents/curriculum/electricity-3/</a></li> <li>• <a href="https://we-energies.e-smartkids.com/">https://we-energies.e-smartkids.com/</a></li> <li>• <a href="https://justenergy.com/blog/electricity-for-kids/">https://justenergy.com/blog/electricity-for-kids/</a></li> <li>• <a href="https://extension.purdue.edu/blackford/article/2276">https://extension.purdue.edu/blackford/article/2276</a></li> </ul>