ELECTRONICS MERIT BADGE REQUIREMENTS

Additional checkoff sheets and helps are available from ScouterMom.com.

1. Describe the safety precautions you must exercise when using, building, altering, or repairing electronic devices.										
2. Do the following:										
2a. Draw a simple schematic diagram. It must show resistors, capacitors, and transistors or integrated circuits. Use the correct symbols. Label all parts.										
2b. Tell the purpose of each part.										
3. Do the following:										
3a. Show the right way to solder and desolder										
3b. Show how to avoid heat damage to electronic components.										
3c. Tell about the function of a printed circuit board. Tell what precautions should be observed when soldering printed circuit boards.										
4. Discuss each of the following with your merit badge counselor, and then choose ONE of the following and build a circuit to show the techniques used:										
4a. Tell how you can use electronics for a control purpose, and then build a control device circuit.										
4b. Tell about the basic principles of digital techniques, and then build a digital circuit. Show how to change three decimal numbers into binary numbers and three binary numbers into decimal numbers.										
4c. Tell about three audio applications of electronics, and then build an audio circuit										
Show how to read the schematic diagram of the project you chose and, to the best of your ability, explain to your counselor how the circuit you built operates.										
5. Do the following:										
5a. Show how to solve a simple problem involving current, voltage, and resistance using Ohm’s law										
5b. Tell about the need for and the use of test equipment in electronics. Name three types of test equipment. Tell how they operate.										
6. Find out about three career opportunities in electronics that interest you. Discuss with and explain to your counselor what training and education are needed for each position.										
Completed										
Presented										