



2. Do the following:

a. Show the right way to solder and unsolder.

Shown to counselor: \_\_\_\_\_

b. Show how to avoid heat damage to **components**.

Shown to counselor: \_\_\_\_\_

c. Tell about the function of a printed circuit board. Tell what precautions should be observed when soldering printed circuit boards.

Told to counselor: \_\_\_\_\_

3. Select ONE of the following:

a. Tell how you can use electronics for a control purpose. Build a circuit to show this.

Explained to counselor: \_\_\_\_\_

Brief description of circuit built: \_\_\_\_\_

\_\_\_\_\_

b. Tell about the basic principles or digital techniques. Show how to change three decimal numbers into binary numbers. Show how to change three binary numbers into decimal numbers. Build a circuit to show digital techniques.

Told to counselor: \_\_\_\_\_

Brief description of circuit built: \_\_\_\_\_

\_\_\_\_\_

- c. Tell about three audio applications of electronics. Build a circuit to show audio techniques.

#1 audio application explained: \_\_\_\_\_

\_\_\_\_\_

#2 audio application explained: \_\_\_\_\_

\_\_\_\_\_

#3 audio application explained: \_\_\_\_\_

\_\_\_\_\_

Type of circuit built: \_\_\_\_\_

4. Do the following for the project you built in requirement 3:

- a. Show how to read the schematic diagram of the project.

Demonstrated to counselor: \_\_\_\_\_

- b. Show how the project works. To the best of your ability, tell how it operates.

Explained to counselor: \_\_\_\_\_

5. Do the following:

- a. Show how to solve a simple problem involving current, voltage, and resistance using Ohm's law.

- b. Tell about the need for and the use of test equipment in electronics. Name three types of test equipment. Tell how they operate.

Explained to counselor: \_\_\_\_\_

c. Tell about three jobs in electronics. Tell what training is needed for each job.

Job #1: \_\_\_\_\_ Job #2: \_\_\_\_\_

Job #3: \_\_\_\_\_

Explained to counselor: \_\_\_\_\_

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**In completing all requirements for this merit badge, I have completely read the appropriate BSA merit badge book, and discussed same with my counselor.**

\_\_\_\_\_  
**signed**

\_\_\_\_\_  
**date**

(Source: Courtesy USSSP Merit Badge Requirements, current as of the MB date on this document)