



ELECTRONICS MERIT BADGE WORK SHEET (BYU/UVU PowWow)

Scout's Name

Instructor's Name

Scout's Address

City

State

ZIP

Instructions

- 1) The Scout is to review the merit badge book before the first week of PowWow.
- 2) Bring this work sheet, paper, and pencil or pen each week.

Requirement Instructions*

- 1) Requirement 1 should be completed **before** PowWow and ready to pass off by the first session.
- 2) Requirement 2 will be passed off during the two sessions of PowWow.
- 3) Requirement 3 will be passed off during the two sessions of PowWow.
- 4) Requirement 4a, 4b, or 4c should be completed as **homework** between the two sessions of PowWow.
- 5) Requirement 5 will be passed off during the two sessions of PowWow.
- 6) Requirement 6 should be completed **before** PowWow and ready to pass off by the first session.

*All requirements may be subject to change by the merit badge counselor based on time constraints at the PowWow session. Please listen to all instructions given by the instructor to be aware of any changes.

Requirement 1

Initial

Describe the safety precautions you must exercise when using, building, altering, or repairing electronic devices.

Requirement 2

Initial

In the area below, draw a simple schematic diagram. It must show resistors, capacitors, and transistors or integrated circuits. Use the correct symbols. Label all parts.

List the main parts you used and give the use or purpose of each.

Part: Purpose:

Part: Purpose:

Part: Purpose:

Part: Purpose:

Part: Purpose:

Part: Purpose:

Part: Purpose:

Requirement 3

Initial

Demonstrate to your counselor the correct way to solder. Briefly explain/describe the process.

Demonstrate to your counselor the correct way to desolder. Briefly explain/describe the process.

Tell how to avoid heat damage to electrical components.

Tell about the function of a printed circuit board.

Tell what precautions should be observed when soldering printed circuit boards.

Requirement 4

Initial

Discuss each of the following options with your merit badge counselor. Then choose ONE of the following and build a circuit to show the techniques used.

Option 1:

- a. Tell how you can use electronics for a control purpose.

Build a control device circuit. Describe the circuit that you built.

Option 2:

- b. Tell about the basic principles of digital techniques.

Build a digital circuit. Describe the circuit that you built.

Name:

Operation:

Requirement 6

Initial

Tell about three career opportunities in electronics that interest you. Explain what training and education are needed for each position.

Job Title:

Description:

Training Needed:

Job Title:

Description:

Training Needed:

Job Title:

Description:

Training Needed:

Merit badge work sheets will not be accepted at the Council Office in place of the official Merit Badge Application Card. Those who do not complete all the requirements should take their partially completed merit badge work sheet and their official application card to their local merit badge counselors for completion.