

b. Tell the purpose of each part.

Resistor:

Capacitor:

Transistor:

Integrated circuit:

Other?:

3. Do the following:

- a. Show the right way to solder and desolder.
- b. Show how to avoid heat damage to electronic components.
- c. Tell about the function of a printed circuit board.

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

4. Do the following:

a. Discuss each of the following with your merit badge counselor,

i. How to use electronics for a control purpose.

ii. Explain the basic principles of digital logic

iii. How to use electronics for three different audio applications.

- b. Show how to change three decimal numbers into binary numbers and three binary numbers into decimal numbers.

- c. Choose ONE of the following three projects. For your project, find or create a schematic diagram. To the best of your ability, explain to your counselor how the circuit you built operates.
 - i. A control device
 - ii. A digital circuit.
 - iii. An analog circuit.

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.

1.	
2.	

