

Electricity Merit Badge:

Your Name: _____ Home Phone: _____

Date Starting This Merit Badge: _____

Counselor's Name: _____

How to Contact Your Counselor: _____

Note to the Scout and Merit Badge Counselor:

This set of worksheets is meant to facilitate earning this merit badge, but under no circumstances is it meant to be used in lieu of the appropriate BSA merit badge book.

REQUIREMENTS were REVISED as of 09/01/95 and 09/01/96.

1. Show magnetic attraction and repulsion. Make and use a simple electromagnet.

Shown to counselor: _____ Electromagnet shown, used: _____

2. Explain the difference between a direct current and an alternating current. Tell the common uses of each.

Explained to counselor: _____

3. Make a simple drawing to show how a chemical cell and an electric bell work.

4. Explain why a fuse blows or a circuit breaker trips. Tell how to find a blown fuse or tripped circuit breaker in your home. Show how to change the fuse or reset the circuit breaker safely.

Explained, told, shown to counselor: _____

5. Explain what overloading an electric circuit means. Tell what you have done to make sure your home circuits aren't overloaded.

Explained, told to counselor: _____

6. Demonstrate how to repair a plug on an appliance cord.

Demonstrated to counselor: _____

7. Show how to rescue a person touching a live wire in the home. Show first aid if the person is unconscious from electrical shock.

Shown to counselor: _____

8. Show on a floor plan of a room in your home the lights, switches, and outlets. Show which fuse or circuit breaker protects each.

Shown to counselor: _____ Floor plan attached? _____

9. Read an electric meter. Figure an electric bill from meter readings.

Shown to counselor: _____

10. Explain 10 electrical terms such as volt, ampere, watt, ohm, resistance, potential difference, rectifier, rheostat, conductor, ground, circuit, or short circuit.

Explained to counselor: _____

11. Do any TWO of the following:
- a) Connect a buzzer, bell or light with a battery. Have a key or switch in the line.
 - b) Make and run a simple electric motor (not from a kit).
 - c) Build a simple rheostat. Show that it works.
 - d) Build a single-pole double-throw switch. Show that it works.
 - e) Hook a model electric train layout to a house circuit. Tell how it works.

Completed: _____

BSA Advancement ID#: 43
Pamphlet Revision Date: 1999
Requirements last updated in 1995 and 1996

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)