

ELECTRICITY

REQUIREMENT #1

Demonstrate that you know how to respond to electrical emergencies by doing the following:

- a. Show how to rescue a person touching a live wire in the home.
- b. Show how to render first aid to a person who is unconscious from electrical shock.
- c. Show how to treat an electrical burn.
- d. Explain what to do in an electrical storm.
- e. Explain what to do in the event of an electrical fire.

REQUIREMENT #2

Complete an electrical home safety inspection of your home, using the checklist found in this pamphlet or one approved by your counselor. Discuss what you find with your counselor.

*** Pre-requisite***

REQUIREMENT #3

Make a simple electromagnet and use it to show magnetic attraction and repulsion.

REQUIREMENT #4

Explain the difference between direct current and alternating current.

REQUIREMENT #5

Make a simple drawing to show how a battery and an electric bell work.

REQUIREMENT #6

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 safely reset the circuit breaker.

REQUIREMENT #7

Explain what overloading an electric circuit means.

Tell what you have done to make sure your home circuits are not overloaded.

REQUIREMENT #8

On a floor plan of a room in your home, make a wiring diagram of the lights, switches and outlets. Show which fuse or circuit breaker protects each one.

Pre-requisite

Please bring to class

REQUIREMENT #9

Do the following:

- a. Read an electric meter and using your family's electric bill, determine the energy cost from the meter reading.

Pre-requisite

- b. Discuss with your counselor five ways in which your family can conserve energy.

1. _____
2. _____
3. _____
4. _____
5. _____

REQUIREMENT #10

Explain the following electrical terms:

Volt: _____

Ampere: _____

Watt: _____

Ohm: _____

Resistance: _____

Potential difference: _____

Rectifier: _____

Rheostat: _____

Conductor: _____

Ground: _____

Short Circuit: _____

REQUIREMENT #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.
- 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.