



Pathfinder Honour: Requirements & Framework

Electricity

Part of Vocational Category of Honours

Honour Patch



Part of Technician Master Honour



Snapshot of Honour

In this honour you will gain a basic understanding of the wonders of electricity - electrical repulsion and attraction, direct current, alternating current, batteries, electric motors and electrical safety devices.

You'll know the first things to do in the event of a person suffering electric shock.

You'll examine two simplified circuits; the lights of a car and the electric power in a house. Have fun making things such as a simple cell battery and an electromagnet.

Contact with high voltage electricity (ie above 32 Volts) is beyond the scope of the honour.

Honour History:

Original Honour: 1929, author not known

General Conference: Reviewed 2001

South Pacific Division : Reviewed July 2009.

- Reviewed Alan Aldridge, South Queensland Conference
- Tony Coyte, Western Australia Conference
- John Sommerfeld, South Queensland Conference

Electricity Honour

Honour Framework [Compulsory items are underlined. Others are for guidance]

#Skill Level:	Level 2
<u>Pre-requisites:</u>	Nil
Preparation Time:	Average (4-8 hrs)
Physical Requirements:	Minimal
Equipment/Materials Required:	Materials to make electric bell, simple battery. See requirements.
Location:	Indoors
Sabbath Appropriate:	Not Likely
Safety & Legal Requirements:	Refer to and comply with Local, State and Country Requirements. All duty of care must be complied with.
Links to P/F Curriculum: (Cards, Speciality, Pursuits), or AO Modules	
Suggested Teaching / Presentation method(s):	Presentation and Discussion; Practical application.
Recommended Assessment:	Workbook & Assessment Sheet which has a checklist of practical requirements and a short test to check knowledge of the honour.
List of Resources:	See Trainer's Notes

#Skill Level. A General Conference term which broadly describes typical physical and mental development. Level 1 (Friends, Companions); Level 2 (Explorers, Rangers); Level 3 (Voyagers, Guides)

Honour Components:

Requirements:	See following page
Trainer's Notes:	Electricity Honour Trainer's Notes
Student's Workbook:	Electricity Honour Workbook
Assessment Method:	Electricity Honour Assessment (On SPD Honour Website but Leader's level access is required)

Electricity Honour

Requirements

Source: General Conference of SDA, 16 June 2009.

<http://gcyouthministries.org/Ministries/Pathfinders/Honors/tabid/85/agentType/View/PropertyID/247/Default.aspx>

Note: Any Additional South Pacific Division (SPD) Requirements are in italics

~~Strikethroughs~~ show parts not applicable to the SPD.

Instructor Required. This honour is intended to provide a general knowledge of electricity. Practical components are limited to low voltage electricity only (ie below 32 volts)

1. Be able to explain and illustrate an experiment by which the laws of electrical attraction and repulsion are shown.
2. Explain the difference between a direct and an alternating current, and ~~demonstrate~~ *describe* the uses to which each is adapted. Give a method of determining which kind flows in a given circuit.
3. Make a simple electromagnet or connect a bell or light with a battery using an in-line switch.
4. Make and run a simple electric motor from a kit or take apart an electric motor and identify the parts and explain how it works.
5. ~~Be able to~~ Make a simple battery cell.
6. ~~Demonstrate ability to replace fuses or reset breakers, and show the proper way to splice wires. Explain the purpose of fuses and circuit breakers and show the proper way to splice electrical wires.~~ *Show how to splice electrical wires effectively.*
7. *Explain the use and application of electrical safety devices used to protect electrical systems and to reduce the risk of electrocution.*
8. ~~Show how to rescue a person in contact with a live electric wire, and have knowledge of the method of reviving a person insensible from shock.~~ *Demonstrate the first things to do in the event of a person becoming insensible due to electric shock. This is before first aid or medical attention is administered.*
9. ~~Make a~~ *Understand the main elements of a simplified diagram of a lighting system of an automobile.*
10. ~~Make a~~ *Understand the main elements of a simplified diagram properly showing the lights, switches, and convenience (ie power) outlets controlled by each fuse or breaker in a house.*
11. ~~Read an electric meter correctly, and compute a residence bill at the rate charged in your community.~~ *Discuss a typical residential electricity bill and comment on the various tariff levels, 'add-on costs' and any benefits or special deals. Verify the amount charged on an electricity bill.*

General Conference Reference No: ELECTRICITY (YOU5500)