

Electricity Merit Badge – Home Inspection Checklist and Electrical Wiring Map

Scout Name _____ Date _____ Parent Signature _____

Complete an electrical safety check at your home. Be able to discuss what you find.

Electrical Cords & Outlets

Inspect all wires and cords for fraying or damage. Are all wires and cords in good condition?

Yes Problems found and corrected.

Are wires and cords kept out from beneath furniture and carpets?

Yes Problems found and corrected.

Are outlets properly used and not overloaded?

Yes Problems found and corrected.

Are indoor extension cords only used inside?

Yes Problems found and corrected.

Do your outlets in bathrooms or near water have ground fault circuit interrupters?

Yes Problems found and corrected.
(Professional electrician will be needed)

Circuit breakers/fuses

Do you have the correct size and rating for your circuit breaker/fuse box?

Yes Problems found and corrected.
(Professional electrician will be needed)

If you have fuses, do any fuses need to be replaced?

Yes Problems found and corrected.

Appliances

Are electrical appliances, such as refrigerators, computers and video game equipment well ventilated to avoid overheating?

Yes Problems found and corrected.

Are electrical items, such as the television, stereo, curling iron and hair dryer kept away from water to avoid accidental electrocution?

Yes Problems found and corrected.

Are hot items like toasters and coffee makers clear of flammable items?

Yes Problems found and corrected.

Outdoor safety

Are extension cords used safely? (Check if they in the way of lawn mowers and other equipment like power tools.)

Yes Problems found and corrected.

Lightning

Do you use electrical equipment during lightning storms?

No I didn't know this was a problem

Do you have surge protectors on electrical equipment to protect it during electrical storms?

Yes Problems found and corrected.

Space heaters

Are space heaters and other heating devices UL listed and always kept at least 3 feet away from other objects?

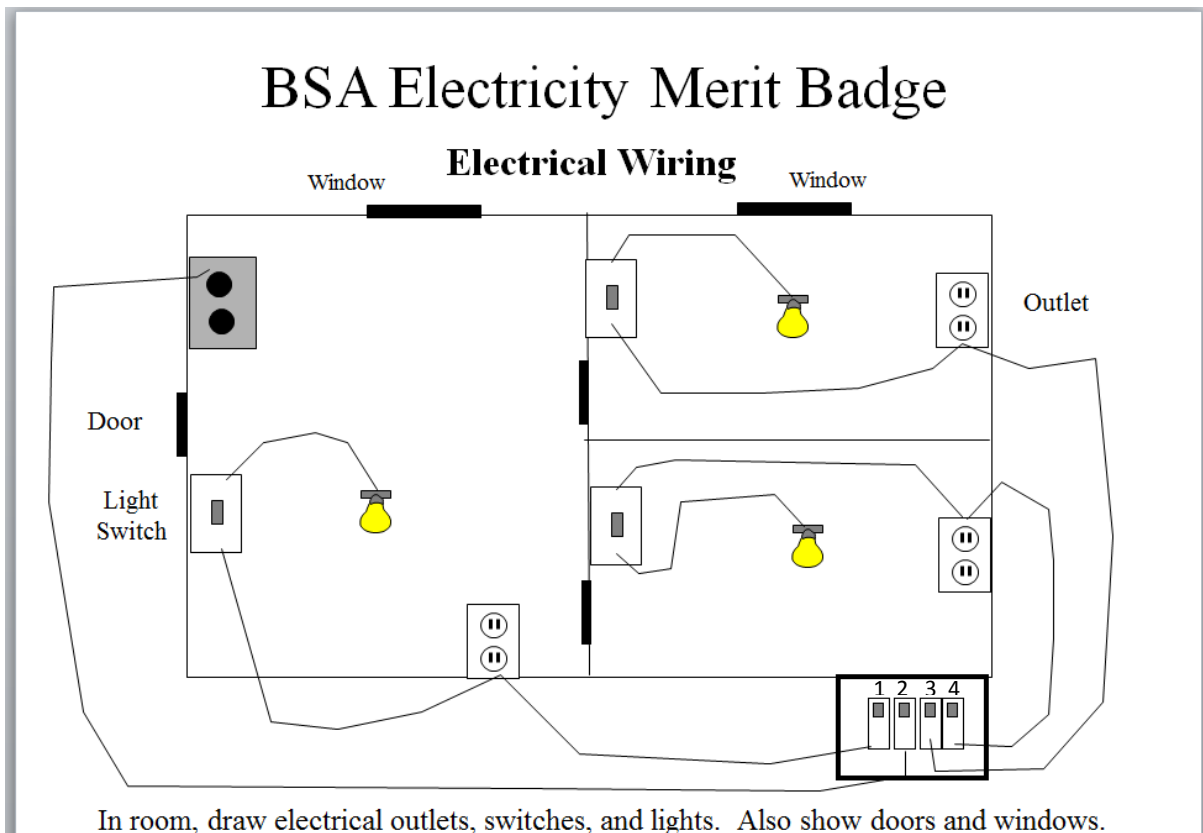
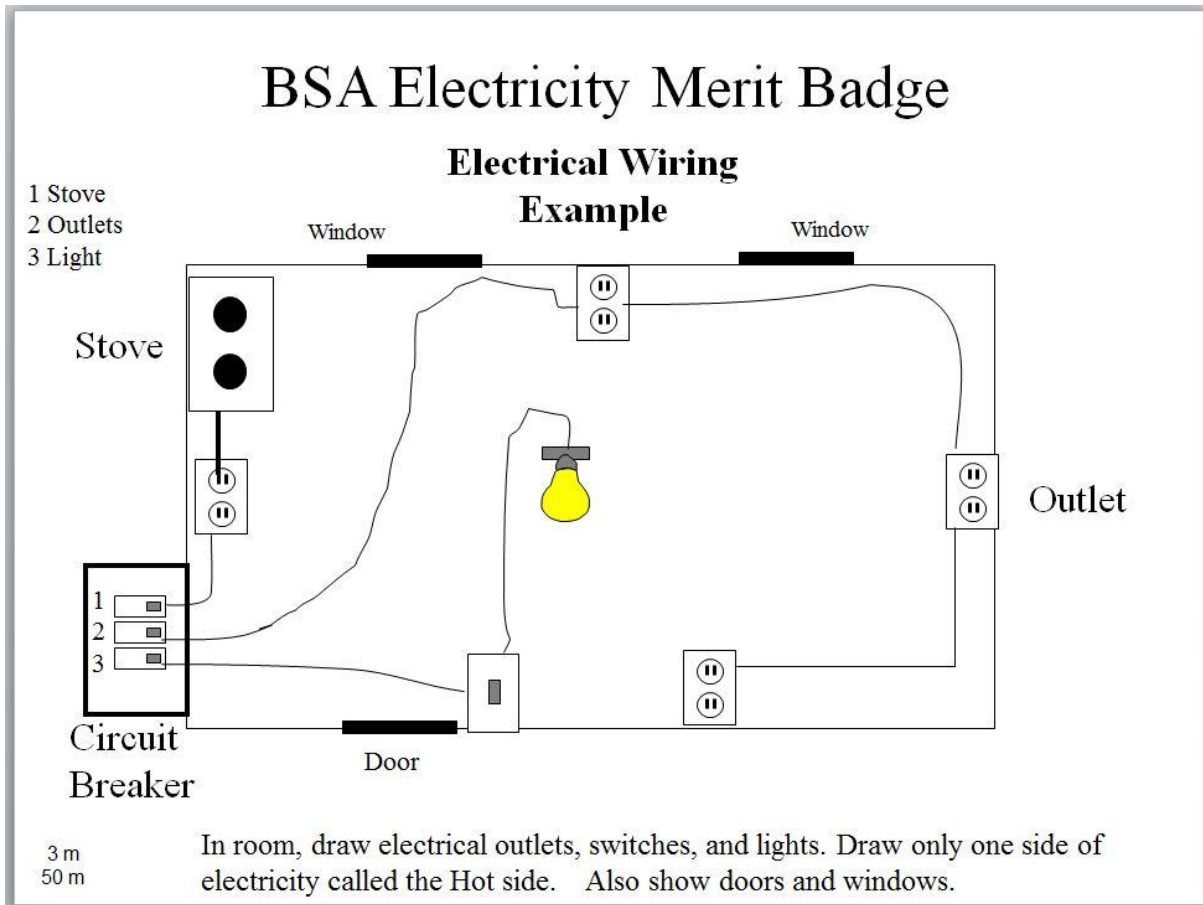
Yes Problems found and corrected.

Are space heaters turned off before going to bed?

Yes I will remember to do this.

Electrical Wiring Map Example

#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.



Electricity Merit Badge Test

Terms

_____ Volt	_____ Resistance	_____ Conductor
_____ Ampere (Amp)	_____ Potential Difference	_____ Ground
_____ Watt	_____ Rectifier	_____ Circuit
_____ Ohm	_____ Rheostat	_____ Short Circuit

Definitions

- A. A metal formed by the combination of two or more metals.
- B. The unit expressing the rate of flow of an electric current.
- C. The use of one ampere for one hour.
- D. A metal formed by the combination of two or more metals
- E. A unit of electromotive force. The electrical potential needed to produce one ampere of current with a resistance of one ohm.
- F. The flow of electrons through a wire.
- G. A device that protects power lines and equipment against high voltage lightning surges and switching surges.
- H. A device that converts an alternating current into a direct one by allowing a current to flow through it in one direction only.
- I. A conductive path over which an electric charge may flow.
- J. An electrical instrument used to control a current by varying the resistance.
- K. To connect to the earth.
- L. An abnormal condition of relatively low resistance between two points of different potential in a circuit usually resulting in a flow of excess current.
- M. The difference between the potentials of two points in an electric field.
- N. The rate of energy in an electric circuit.
- O. A unit of electrical resistance defined as the resistance of a circuit with a voltage of one volt and a current flow of one ampere.
- P. An electro-magnetic device used to change the voltage in an alternating current circuit.
- Q. The conversion of light into electricity.
- R. The maximum electricity that can be applied for a specified period of time without causing damage.
- S. A device that converts DC electricity into single or multiphase AC electricity.
- T. The property of a circuit in which a change in current induces an electro motive force.
- U. A unit of work.
- V. A material which contains movable electric charges.
- W. A material's opposition to the flow of electric current; measured in ohms.