



Electricity

Merit Badge

Home Inspection Checklist

This checklist is not required but is designed to help you with requirement 2 for this merit badge.

It is based on the checklist in the current Electricity merit badge pamphlet (33408B), and the information available at <http://www.esfi.org> on the "Home Electrical Safety Tips" page

Scout's Name: _____

Unit: Troop 149

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1. Outlets

- (a) Check for outlets that have loose-fitting plugs, which can overheat and lead to fire.
- (b) Replace any missing or broken wall plates.
- (c) Make sure there are safety covers on all unused outlets that are accessible to children.

2. Line Cords

- (a) Make sure cords are in good condition—not frayed or cracked.
- (b) Make sure they are placed out of traffic areas.
- (c) Make sure that cords are not nailed or stapled to the wall, baseboard or to another object.
- (d) Make sure that cords are not under carpets or rugs or any furniture rests on them.

3. Extension Cords

- (a) Check to see that cords are not overloaded.
- (b) Check to see that extension cords are only be used on a temporary basis; and are not use as permanent household wiring.
- (c) Make sure extension cords have safety closures to help prevent young children from shock hazards and mouth burn injuries.

4. Plugs

- (a) Make sure your plugs fit securely into your outlets.
- (b) Make sure no plugs have had the ground pin (the third prong) removed in order to make a three-prong fit a two-conductor outlet; this could lead to an electrical shock. **NEVER FORCE A PLUG INTO AN OUTLET IF IT DOESN'T FIT.**
- (c) Avoid overloading outlets with too many appliances.

5. Ground Fault Circuit Interrupters (GFCIs)

GFCIs can help prevent electrocution. When a GFCI senses current leakage in an electrical circuit, it assumes a ground fault has occurred. It then interrupts power fast enough to help prevent serious injury from electrical shock. GFCIs can be installed at the outlet, or as a replacement for the circuit breaker for an entire circuit at the fuse box.

- (a) Check for the presence of GFCIs in all areas where water and electricity may come into contact.
 - (1) Kitchen
 - (2) Bathrooms
 - (3) Garage
 - (4) Laundry room
 - (5) Outdoors
- (b) Test GFCIs according to the manufacturer's instructions monthly and after major electrical storms to make sure they are working properly.
- (c) Replace any GFCI that is not working properly, but never replace a GFCI with a standard non-GFCI outlet or circuit breaker. (Replacement should normally be done by a licensed electrician)
- (d) Do not use an appliance or device that trips a GFCI on a non-GFCI-protected circuit; instead, take the appliance to authorized repair center to be checked for faulty wiring or replace it.

6. Light Bulbs

- (a) Check the wattage of all bulbs in light fixtures to make sure they are the correct wattage for the size of the fixture.
- (b) Replace bulbs that have higher wattage than recommended; if you don't know the correct wattage, check with the manufacturer of the fixture.
- (c) Make sure bulbs are screwed in securely; loose bulbs may overheat.

7. Circuit Breakers/Fuses

- (a) Make sure circuit breakers and fuses are the correct size current rating for their circuit. If you do not know the correct size, have an electrician identify and label the size to be used. Always replace a fuse with the correctly specified size fuse.
- (b) If there are any GFCI breakers, Test them for proper operation.

8. Water and Electricity Don't Mix

- (a) Make sure there are no plugged-in appliances where they might fall in contact with water. If a plugged-in appliance falls into water, NEVER reach in to pull it out—even if it's turned off. First turn off the power source at the panel board and then unplug the appliance. If you have an appliance that has gotten wet, don't use it until it has been checked by a qualified repair person.

9. Appliances

- (a) If an appliance repeatedly blows a fuse, trips a circuit breaker or if it has given you a shock, unplug it and have it repaired or replaced.

10. Entertainment/Computer Equipment

- (a) Check to see that the equipment is in good condition and working properly.
- (b) Look for cracks or damage in wiring, plugs and connectors.
- (c) Use a surge protector bearing the seal of a nationally recognized certification agency.

11. Outdoor Safety

- (a) Electric-powered mowers and other electric tools should not be used in the rain, on wet grass or in wet conditions.
- (b) Inspect power tools and electric lawn mowers before each use for frayed power cords, broken plugs and cracked or broken housings.
- (c) If any part is damaged, stop using it immediately. Repair it or replace it.
- (d) Always use an extension cord marked for outdoor use and rated for the power needs of your tools.
- (e) Remember to unplug all portable power tools when not in use.
- (f) When using ladders, watch out for overhead wires and power lines.

12. Ladders

- (a) When using ladders, avoid contact with overhead wires and power lines.
- (b) Stay at least 10 feet from all lines.

13. Lightning

- (a) During an electrical storm, do not use appliances (i.e., hairdryers, toasters and radios) or telephones (except in an emergency); do not take a bath or shower;
- (b) Keep batteries on hand for flashlights and radios in case of a power outage.
- (c) Use surge protectors on electronic devices, appliances, phones, fax machines and modems.

14. Space Heaters

Space heaters are meant to supply supplemental heat.

- (a) Keep space heaters at least 3 ft. away from any combustible materials such as bedding, clothing, draperies, furniture and rugs.
- (b) Don't use space heaters in rooms where children are unsupervised and remember to turn off and unplug when not in use.
- (c) Do not use space heaters with extension cords; plug directly into an outlet on a relatively unburdened circuit.

15. Halogen Floor Lamps

Halogen floor lamps operate at much higher temperatures than a standard incandescent light bulb.

- (a) Never place a halogen floor lamp where it could come in contact with draperies, clothing or other combustible materials.
- (b) Be sure to turn the lamp off whenever you leave the room for an extended period of time.
- (c) Never use torchiere lamps in children's bedrooms or playrooms. Consider using cooler fluorescent floor lamps.