



# Fire Safety

## Merit Badge Workbook

This workbook can help you but you still need to read the merit badge pamphlet (book). No one can add or subtract from the Boy Scout Requirements #33216. Each Scout must do each requirement. Merit Badge Workbooks and more: [Online Resources](#). Send comments to the workbook developer: [craig@craiglincoln.com](mailto:craig@craiglincoln.com). Requirements revised: 01/1/10, Workbook updated: 02/10.

Scout's Name: \_\_\_\_\_ Unit: \_\_\_\_\_

Counselor's Name: \_\_\_\_\_ Counselor's Ph #: \_\_\_\_\_

### 1. Do the following:

(a) Demonstrate the technique of stop, drop, roll, and cool. \_\_\_\_\_

Explain how burn injuries can be prevented. \_\_\_\_\_

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(b) List the most frequent causes of burn injuries. \_\_\_\_\_

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2. Explain the chemistry and physics of fire. \_\_\_\_\_

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Name the parts of the fire tetrahedron. 1) \_\_\_\_\_ 2) \_\_\_\_\_  
3) \_\_\_\_\_ 4) \_\_\_\_\_

Explain why vapors are important to the burning process. \_\_\_\_\_

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Name the products of combustion. \_\_\_\_\_

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Give an example of how fire grows and what happens. \_\_\_\_\_

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3. Name the most frequent causes of fire in the home and give examples of ways they can be prevented. Include a discussion about fires caused by smoking in the home, cooking, candles, fireplaces, and electrical appliances.

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4. Do the following:

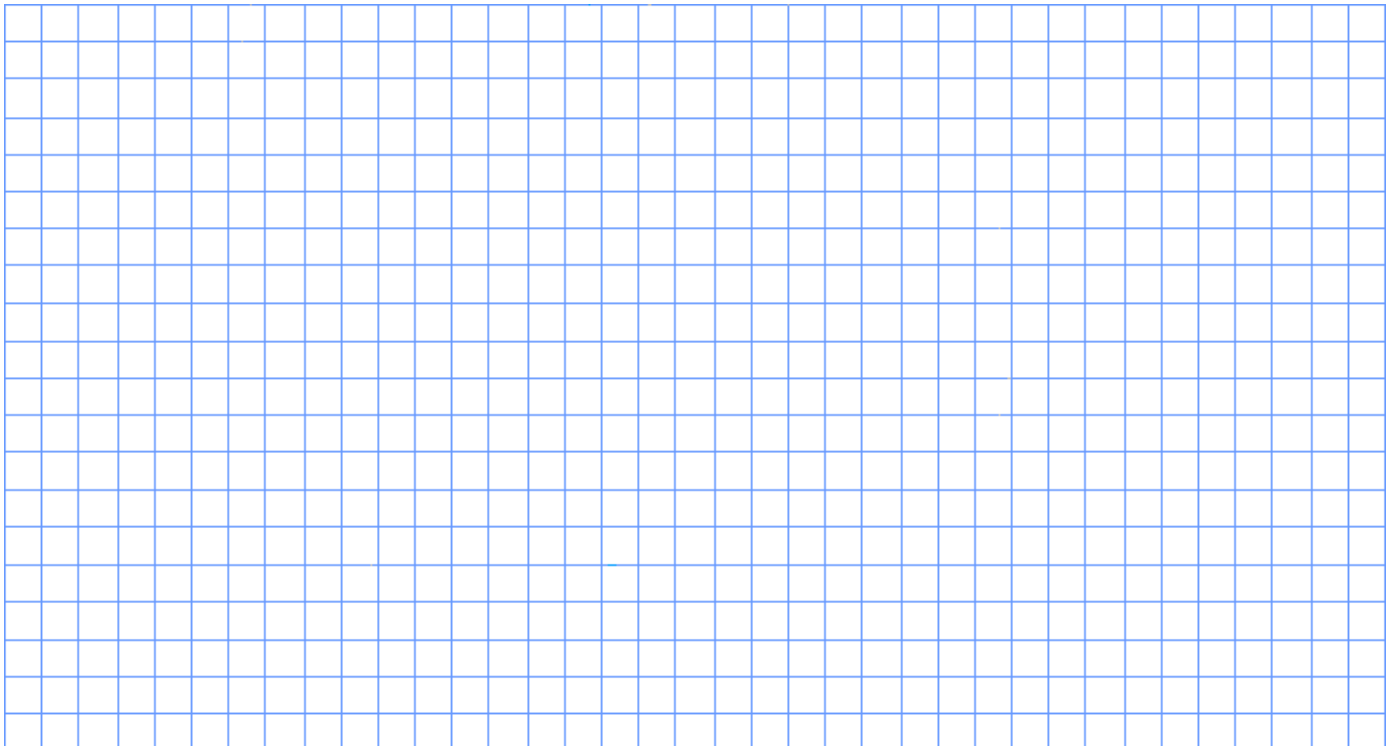
(a) Explain the role of human behavior in the arson problem in this country. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(b) List the actions that cause seasonal fires and explain how these fires can be prevented.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. List the common circumstances that cause holiday-related fires and explain how these fires can be prevented.  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Conduct a home safety survey with the help of an adult. ([Sample Home Safety Checklist](#)) Then do the following:

(a) Draw a home fire escape plan,



create a home fire-drill schedule, and conduct a home fire drill. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

(b) Test a smoke alarm and demonstrate regular maintenance of a smoke alarm. \_\_\_\_\_

(c) Explain what to do when you smell gas \_\_\_\_\_

and when you smell smoke. \_\_\_\_\_

(d) Explain how you would report a fire alarm. \_\_\_\_\_

(e) Explain what fire safety equipment can be found in public buildings. \_\_\_\_\_

(1) Explain who should use fire extinguishers \_\_\_\_\_

and when these devices can be used. \_\_\_\_\_

(g) Explain how to extinguish a grease pan fire. \_\_\_\_\_

(h) Explain what fire safety precautions you should take when you are in a public building. \_\_\_\_\_

7. Do the following:

(a) Demonstrate lighting a match safely. \_\_\_\_\_

(b) Demonstrate the safe way to start a charcoal fire. \_\_\_\_\_

(c) Demonstrate the safe way to melt wax. \_\_\_\_\_

8. Explain the difference between combustible and noncombustible liquids \_\_\_\_\_

and between combustible and noncombustible fabrics. \_\_\_\_\_

9. Do the following:

(a) Demonstrate the safe way to fuel a lawn mower. \_\_\_\_\_

(b) Demonstrate the safety factors, such as proper ventilation, for auxiliary heating devices and the proper way to fuel those devices. \_\_\_\_\_

10. Do the following:

(a) Explain the cost of outdoor and wildland fires \_\_\_\_\_

\_\_\_\_\_

and how to prevent them. \_\_\_\_\_

(b) Demonstrate setting up and putting out a cooking fire. \_\_\_\_\_

(c) Demonstrate using a camp stove and lantern. \_\_\_\_\_

(d) Explain how to set up a campsite safe from fire. \_\_\_\_\_

11. Visit a fire station. Identify the types of fire trucks. \_\_\_\_\_

Find out about the fire prevention activities in your community \_\_\_\_\_

12. Choose a fire safety related career that interests you \_\_\_\_\_

and describe the level of education required \_\_\_\_\_

and responsibilities of a person in that position. \_\_\_\_\_

Tell why this position interests you \_\_\_\_\_

**Online Resources** (Use any Internet resource with caution and only with your parent's or guardian's permission.)

Boy Scouts of America: ▶ [scouting.org](http://scouting.org) ▶ [Guide to Safe Scouting](#) ▶ [Age-Appropriate Guidelines](#) ▶ [Safe Swim Defense](#)  
▶ [Scout](#) ▶ [Tenderfoot](#) ▶ [Second Class](#) ▶ [First Class](#) ▶ [Rank Videos](#) ▶ [Safety Afloat](#)

Boy Scout Merit Badge Workbooks: [BSA Troop 780](#) -or- [usscouts.org](http://usscouts.org) -or- [meritbadge.org](http://meritbadge.org) Merit Badge Books:

[www.scoutstuff.org](http://www.scoutstuff.org)

[ExpertVillage First Aid Videos](#) ▶ [Make a First Aid Kit](#) ▶ [Basics](#) ▶ [Basics2](#) ▶ [CPR Basics](#) ▶ [Venomous Snake Bite](#)

Federal Emergency Management Agency: <http://www.fema.gov>

U. S. Fire Administration: <http://usfa.fema.gov>

Home Safety Council : <http://www.homesafetycouncil.org/>

National Ag Safety Database: <http://www.cdc.gov/nasd/>

National Fire Protection Association : <http://www.nfpa.org/>

Residential Fire Safety Institute: <http://firesafehome.org>

Underwriters Laboratories, Inc.: <http://www.ul.com/>

U.S. Consumer Product Safety Commission: <http://cpsc.gov>

## Sample Home Safety Checklist

Check safety steps that being taking in your home. Write N/A if the item is not applicable. Items left blank may present a safety hazard. This list provides some sample safety steps you might take. See your Safety Merit Badge pamphlet and counselor for more information. Ask your parent or guardian before making any changes.

### Stairways, Halls, and Outdoor Steps

- Stairways with three or more steps have a strong handrail.
- Stairs/halls are kept free from boxes, toys, brooms, tools, etc.
- Gates at top and bottom of stairs prevent children from falling.
- The head and foot of stairs have no small or loose rugs.
- Stair carpeting or covering is fastened securely.
- Stairways & halls have good lighting, controllable at each end.

### Kitchen

- Matches are kept where children cannot get them.
- Knives & sharp instruments are kept in knife drawers or holder.
- Can openers don't leave sharp edges on cans.
- Disinfectants & cleaning products are out of reach of children.
- Pan handles are turned away from stove edges.
- Spilled grease, water, or bits of food are wiped up immediately.
- Pot holders are within easy reach.
- A fire extinguisher is mounted near the stove.

### Bathroom

- Tub and shower are equipped with strong handholds.
- Tub floor has non-slip surface.
- Poisons are marked, sealed shut, and out of reach of children.
- Medicines are out of reach of children in childproof containers.
- No one takes medicine in the dark.

### Attic and Basement

- Ladder is strong, solid, and sturdily constructed.
- Stairway is sturdy and well lighted.
- Children keep skates and play gear in a specific place.
- Walls and beams are free from protruding nails.
- Fuses or circuit breakers are the proper size.
- Rubbish & flammable materials are in covered metal cans.
- Wastepaper is kept away from furnace and stairs.

### Living Room and Dining Room

- Furniture is placed to allow easy passage in an emergency.
- Before bedtime, furniture placement is checked for orderliness.
- Furniture and woodwork solid, in good repair, and free from.
- Fireplace screen fits snugly.
- Rugs are fastened or laid on non-slip pads.

- Rugs are kept from curling at their edges.
- Wax on floors is thoroughly buffed.
- Fire in fireplace is extinguished at bedtime.
- Candles are in stable holders and fully extinguished after use.

### Bedroom

- Smoke alarm has fresh battery or electrical connection & is tested regularly.
- Carbon monoxide detector has fresh battery or electrical connection and is tested regularly.
- Furniture placement for clear passage between bed and door.
- Light switch or lamp is within easy reach from bed.
- A night-light illuminates bedroom or hall.
- Bureau and dresser drawers are closed when not in use.
- Bar across bunk beds helps prevent falls.
- Children are taught not to lean against windows or screens.
- Sturdily screen low windows to prevent children from falling.
- Smoking in bed is prohibited.
- Gas and electric heating devices are turned off at bedtime.

### Nursery

- Bars on cribs are closely spaced.
- Crib is approved by Consumer Products or similar.
- Crib is free from sharp edges or corners.
- Sleeping garments and covers keep baby warm without danger of smothering.
- Pillows are kept out of bassinet or crib.
- No thin, plastic material is in or near the crib.
- Children are taught not to give marbles, etc. to younger children.
- Toys are sturdy & have no sharp edges.
- Nontoxic paint is used on baby furniture and toys.
- All houseplants are nonpoisonous.

## Sample Home Safety Checklist (page 2)

### Stoves, Furnaces, and Heaters

- Stoves are away from curtains.
- Stoves & furnaces are inspected & cleaned annually.
- Gas burners are properly adjusted and free from leaks.
- Gas water and space heaters are equipped with vents or flues.
- Water heater or boiler has a safety valve & is checked yearly.
- Flames of gas burners are protected from drafts.
- Insulating shield protects woodwork within 18" of furnace, etc.
- Keep flammable materials away from stoves, furnaces, etc.
- A wrench is stored near the shut-off valve of outside gas line.

### Porch, Yard, and Garage

- Railings and banisters are sound and inspected periodically.
- Steps and walks are kept free from ice and snow.
- Yard/play space are free from holes, stones, glass, etc.
- Tools and dangerous articles are out of reach of children.
- Dangerous products & chemicals are kept in original containers in locked storage areas.
- Wires and low fences are brightly painted or clearly marked.
- Wells, cisterns, and pits are kept securely covered.
- Disposable materials are not burned outside.
- An area is marked off in the garage for bicycles, wagons, etc.
- Lawn mower is equipped with proper safeguards.

### Workshop

- Good ventilation exists, especially when sanding.
- Safety goggles and/or face mask are available, with eyewash.
- Baking soda is kept handy to neutralize acid burns.
- All electrical tools are either three-wire or double-insulated.
- Work area is well lit & free of clutter, scraps, rags.
- All tools have a place & are in their place.
- Guards are in place on all power tools.
- A push stick is available for use with power saws.

### Electrical Devices and Fixtures

- Electrical fixtures and appliances are located & used beyond arm's length of the sink, stove, tub, shower, or other grounded metal unless outlet is protected by a ground-fault interrupter.
- Do not touch electrical fixtures or appliances with wet hands.
- Disconnect seldom-used appliances when not in use.
- All pull-type sockets have an insulating link.

- Household appliances are disconnected before repairs.
- Unused, open, screw-type sockets are plugged closed.
- Frayed or worn electric cords are promptly replaced.
- Long trailing cords are not in evidence.
- Cords are kept out from under rugs, doors, and furniture.
- UA-approved extension cords are the proper size.
- Children are taught never to touch electric sockets or fixtures.
- Fuses are adequate for the load and are not bypassed.
- Circuit breakers are not overloaded.

### General

- At least one smoke detector in each bedroom & garage.
- Everything has a place and is in its place.
- Stepladders are in good repair and stored out of the way.
- Window screens and storm windows are securely fastened.
- Guns are stored unloaded and in locked cases.
- Guns and ammunition are stored separately.
- Children are permitted to use only blunt-end scissors.
- Housework clothing has no drooping sleeves, sashes, or frills.
- Shoes worn for housework have low heels.
- All shoes are in good repair.
- Kerosene, gasoline, paint thinners, and other volatile materials are stored outside in special, clearly marked metal containers.
- Oil mops, dust rags, painting equipment, and other oily materials are stored outside in open metal containers.
- Everyone turns on a light before entering a dark room.
- Matches are extinguished before they're thrown away.
- Children are never permitted to play with matches.
- Fire extinguishers are readily available.

### For Emergency

- Know how to get emergency help (911, poison control, etc.).
- Be able to find water, gas, & electric shutoffs. Check annually.
- First aid kit approved by your doctor/American Red Cross.
- Know basic first aid procedures.
- Have a fire escape plan from your home.
- Emergency water supply.
- Handheld flashlights readily available.
- In earthquake-prone areas, make sure that the water heater and bookcases are bolted to the walls.