



FIRE SAFETY

Merit Badge Requirements

- 1) Explain the chemistry and physics of fire. Name the parts of the fire tetrahedron. Explain why vapors are important to the burning process. Name the products of combustion. Give an example of how fire grows and what happens.
- 2) name the most frequent causes of fire in the home and give examples of ways it can be prevented.
- 3) List the actions that cause seasonal fires and explain how these fires can be prevented.
- 4) List common circumstances that cause holiday-related fires and explain how these fires can be prevented.
- 5) List the most frequent causes of burn injuries.
- 6) Conduct a home safety survey with the help of an adult, 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. (Note: Establish a pattern. For example, change smoke alarm batteries at least once a year -- on the same birthday or holiday each year, or when you set your clocks forward for daylight savings time in the spring, or back in the fall for return to standard time.
 - C) Explain what to do when you smell gas and when you smell smoke.
 - D) Explain how you could call in a fire alarm.
 - E) Explain what fire safety equipment may be found in public buildings.
 - F) Explain who should use fire extinguishers and when they can be used.
- 7) Do the following:
 - A) Demonstrate lighting a match safely.
 - B) Demonstrate the safe way to start a charcoal fire.
 - C) Demonstrate how to extinguish a grease pan fire.
 - D) 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 such devices.
 - C) Demonstrate the technique of stop, drop, roll, and cool. Explain how burn injuries can be prevented.
- 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 a fire.
- 11) Visit a fire station. Identify the types of fire trucks. Find out about the fire prevention activities in your community.

Requirement 1

Explain the chemistry and physics of fire: _____

Name the parts of the fire tetrahedron:

1: _____ 2: _____ 3: _____ 4: _____

Why are vapors important to the burning process? _____

Name the products of combustion:

1: _____ 2: _____ 3: _____

Give an example of how fire grows and what happens: _____

Requirement 2

Name the most frequent causes of fire in the home and give examples of ways it can be prevented.

Cause #1: _____

Prevention: _____

Cause #2: _____

Prevention: _____

Cause #3: _____

Prevention: _____

Cause #4: _____

Prevention: _____

Cause #5: _____

Prevention: _____

Cause #6: _____

Prevention: _____

Requirement 3

List the actions that cause seasonal fires and explain how these fires can be prevented:

December - February: _____

Prevention: _____

March - May: _____

Prevention: _____

June - August: _____

Prevention: _____

September - November: _____

Prevention: _____

Requirement 4

List common circumstances that cause holiday-related fires and explain how these fires can be prevented:

December - February: _____

Prevention: _____

March - May: _____

Prevention: _____

June - August: _____

Prevention: _____

September - November: _____

Prevention: _____

Requirement 5

List the most frequent causes of burn injuries:

Cause: _____

Cause: _____

Cause: _____

Requirement 6

__ Attached to the back of this worksheet you will find a Home Safety Survey. Complete the survey before moving on.

After completing the safety survey, use the area below to draw a home fire escape plan. Follow the layout and include everything described in your merit badge pamphlet.



Using the information given in the merit badge pamphlet, create a home fire drill schedule. Use this space or attach an additional piece of paper to the worksheet:

__ Conduct a home fire drill

Describe how your fire drill turned out and identify any part of your fire drill that needs more practice: _____

__ Test a smoke alarm.

Describe regular maintenance of a smoke alarm: _____

Establish a pattern for testing your smoke alarms. When & how often have you decided to test your smoke alarms? _____

Explain what to do when you smell gas: _____

Explain what to do when you smell smoke: _____

Explain how you could call in a fire alarm: _____

Explain what fire safety equipment may be found in public buildings: _____

Explain who should use fire extinguishers: _____

Explain when fire extinguishers should be used: _____

(Not Required)

Can you explain when a fire extinguisher should NOT be used? _____

Requirement 7

With your counselor present, demonstrate the following and list any key items to remember when performing the task:

___ Light a match safely.

Key things to remember: _____

___ Safely start a charcoal fire.

Key things to remember: _____

___ Properly extinguish a grease pan fire.

Key things to remember: _____

___ Safely melt wax.

Key things to remember: _____

Requirement 8

Explain the difference between combustible and noncombustible liquids: _____

Explain the difference between combustible and noncombustible fabrics: _____

Requirement 9

With your counselor present:

___ Demonstrate the safe way to fuel a lawn mower.

___ Demonstrate the safety factors, such as proper ventilation, for auxiliary heating devices.

___ Demonstrate the proper way to fuel auxiliary heating devices.

___ Demonstrate the technique of stop, drop, roll, and cool.

Explain how burn injuries can be prevented: _____

Requirement 10

Explain the cost of outdoor and wildland fires: _____

Explain how to prevent outdoor and wildland fires: _____

__ Demonstrate setting up and putting out a cooking fire.

Key things to remember: _____

__ Demonstrate using a camp-stove and lantern

Key things to remember: _____

Explain how to set up a campsite safe from a fire: _____

Requirement 11

__ Visit a fire station

Briefly describe your visit: _____

What types of truck did you see and identify during your visit to the fire station? _____

What fire prevention activities are going on in your community? _____

Home Safety Survey

Together with your parents and other members of your family, use this checklist to check the safety of your house. Not every question will apply to your home, but most probably will. For each question that is answered with a yes, put a number 1 in the score column. After going through the entire list, add up your score. Where you have answered no, attempt to correct the hazards or change the actions. After a few days of making corrections, go through the list again and see how much your score has improved.

Fire Safety Checklist

Score **Matches**

- | | | | |
|-----|--|---------|--------|
| ___ | Are matches kept where young children can not get hold of them? | ___ Yes | ___ No |
| ___ | Are strike-anywhere matches kept in metal containers? | ___ Yes | ___ No |
| ___ | Are all matches kept away from sources of heat such as stoves and heaters? | ___ Yes | ___ No |
| ___ | Do you see to it that all matches and smoking materials are out before they are disposed of? | ___ Yes | ___ No |
| ___ | Are there plenty of unburnable deep-dish ashtrays in all rooms of the house? | ___ Yes | ___ No |
| ___ | Is "no smoking in bed" a rule of the house? | ___ Yes | ___ No |
| ___ | is a responsible person left with the children when the parents go out, even for a little while? | ___ Yes | ___ No |
| ___ | Are baby-sitters instructed carefully on what to do in case of fire? | ___ Yes | ___ No |

Smoke Detectors

- | | | | |
|-----|--|---------|--------|
| ___ | Are the smoke detectors in your home installed properly? | ___ Yes | ___ No |
| ___ | Are smoke detectors located in all sleeping areas of your home and on every level? | ___ Yes | ___ No |
| ___ | Are all smoke detectors tested at least once a month? | ___ Yes | ___ No |
| ___ | When the smoke detector sounds, does everyone know to get out of the house immediately? | ___ Yes | ___ No |
| ___ | If a smoke detector fails to operate when tested, is it fixed immediately? | ___ Yes | ___ No |
| ___ | Do you change the batteries in your smoke alarms at least once a year, such as on a birthday or holiday, or when you set your clocks forward in the spring for daylight savings time, or back in the fall for return to standard time? | ___ Yes | ___ No |

Electrical Hazards

- | | | | |
|-----|---|---------|--------|
| ___ | Are only qualified electricians allowed to install or extend wiring? | ___ Yes | ___ No |
| ___ | When you buy electrical equipment - extension cords, appliances, TV sets, and all other devices - do you always make sure it has been tested at an approved facility, such as Underwriters' Laboratories? | ___ Yes | ___ No |
| ___ | Are enough electrical outlets in each room to avoid the need for multiple attachment plugs and long extension cords? | ___ Yes | ___ No |
| ___ | Are there special circuits for heavy-duty appliances such as stoves, air conditioners, and clothes dryers? | ___ Yes | ___ No |
| ___ | On the household lighting circuit, are the proper fuses or circuit-breakers used? | ___ Yes | ___ No |
| ___ | Are all extension cords in the open - not run under rugs, over hooks, or through partitions or door openings? | ___ Yes | ___ No |

Storage And Flammable Liquids

- | | | | |
|-----|--|---------|--------|
| ___ | Are your basement, closets, and attic kept free of rubbish, oily rags, flammable liquids, large stacks of paper, etc., and is necessary storage kept in orderly fashion? | ___ Yes | ___ No |
| ___ | After oily polishing rags are used, are they destroyed or else placed in covered metal cans in a metal cabinet in the garage? | ___ Yes | ___ No |
| ___ | If you store paint, varnish, or other flammable liquids, are the containers metal, tightly closed, and kept in a metal cabinet in the garage? | ___ Yes | ___ No |
| ___ | If you keep gasoline for use in a power mower or outboard motor, is it stored in an approved metal can with a self-closing cap on the openings? | ___ Yes | ___ No |
| ___ | If you burn coal, are ashes put in metal containers, clear of wood floors or partitions? | ___ Yes | ___ No |
| ___ | Has everyone in the family been warned never to use gasoline, benzine, or other flammable liquids for cleaning clothes, furnishings, or floors? | ___ Yes | ___ No |
| ___ | If your garage is attached to the house or in the basement, is it separated from the living area by cutoff walls with a tight-fitting door? | ___ Yes | ___ No |

Heating And Cooking

- IF you use oil heat, is the equipment listed by Underwriters' Laboratories? Yes No
- If you use gas heat, is the equipment listed by Underwriter's Laboratories or the American Gas Association Laboratories? Yes No
- If your heating system is oil or coal, do you have it inspected and serviced before each season begins? Yes No
- If your heating system is gas, is it regularly checked and serviced? Yes No
- Are all chimneys, gas and smoke pipes, and other flue connections inspected each fall and cleaned and repaired as necessary? Yes No
- Are walls, ceilings, and partitions near heating and cooking equipment either adequately separated from the sources of heat or protected by noncombustible materials? Yes No
- Are wood floors under space heaters or coal stoves protected by insulation or ventilated air space? Yes No
- Is the inside basement door at the head of the stairs tightly fitted and kept closed at night? Yes No
- Is the kitchen stove, including the oven and broiler, kept clean of grease? Yes No
- Is the kitchen exhaust fan kept clean of grease? Yes No
- Are curtains arranged so as not to blow over stoves and heaters? Yes No
- Are all portable and space heaters set level and out of the way of traffic? Yes No
- Are oil and gas heaters, which use oxygen as they burn, properly vented? Do you always keep a door or window slightly open in any room where such a heater is being used? Yes No
- Are the fuel tanks of oil heaters refilled only by adults outdoors and in daylight? Yes No
- Are the gas connections for space heaters or other gas appliances made of metal? Yes No
- Has everyone in the family been warned never to use kerosene or other flammable liquids to start a fire in the fireplace or furnace? Yes No
- Is every indoor fireplace equipped with a sturdy metal fire screen? Yes No
- Are the shutoff valves for gas appliances located on the rigid metal gas pipeline where they can be reached in case of trouble - and not on the appliance? Yes No
- Have all electric, oil, or gas heaters been tested and listed by a recognized testing laboratory such as Underwriters' Laboratories? Yes No

Yard Hazards

- Do you keep your yard cleared of leaves, debris, and combustible rubbish? Yes No
- In areas where burning trash is permitted, are trash and refuse burned only in suitable outdoor incinerators and on sufficiently calm days? Yes No
- Is an adult always present during the entire time trash or leaves are being burned outdoors? Yes No
- Are charcoal grills used only outdoors and lighted without the use of liquid fuels? Yes No

Holiday Hazards

- Do you have a safe and sane fourth of July by not using fireworks? Yes No
- In buying gift toys, do you insist on those that can't cause fire, shock, or explosion? Yes No
- Is your Christmas tree kept in water and thrown out when the needles begin to fall? Yes No
- Is all decorative lighting checked for frayed and loose sockets? Yes No
- Is the tree kept outside until you are ready to set it up? Yes No
- Is there a switch away from the tree for turning the lights on and off? Yes No
- Are tree lights shut off whenever you go out or to bed? Yes No
- Are all decorating materials noncombustible? Yes No
- Are gift wrappings gathered up and disposed of promptly after presents are opened? Yes No
- Are candles placed so they cannot reach combustible materials? Yes No
- Does every family member know the proper procedure for reporting a fire in your community, such as the 911 or other emergency number, or the location of the neighborhood fire-alarm box? Yes No
- Does every family member know how to call the fire department? Yes No
- Did the entire family take part in completing this checklist? Yes No

Parents Signature: _____

1st SCORE TOTAL: _____

2nd SCORE TOTAL: _____