



Safety Merit Badge Guide

Requirements
2022 09 26

1. Explain what safety is and what it means to be safe. Then prepare a notebook to include:
 - (a) Newspaper, internet (with parent's or guardian's permission), or other articles, facts, and statistics showing common types and causes of injuries in the home and in the workplace, and how these injuries could be prevented
 - (b) Newspaper, internet (with parent's or guardian's permission), or other articles, facts, and statistics showing common types of crime and ways to avoid being a crime victim
 - (c) A paragraph or more, written by you, explaining how a serious fire, accident, or crime could change your family life
 - (d) A list of safe practices and safety devices currently used by your family, such as safety practices used at home, while working, and while driving

2. Do the following:
 - (a) Using a safety checklist approved by your counselor, make an inspection of your home. Identify any hazards found and explain how these can be corrected.
 - (b) Review and develop your family's fire prevention plan. Review your family's emergency action plan for fire in your home. As you develop these plans with family members, share with them facts about the common causes of fire in the home, such as smoking, cooking, electrical appliances, and candles.

3. Do the following:
 - (a) Discuss with your counselor how you contribute to the safety of yourself, your family, and your community.
 - (b) Show your family members how to protect themselves and your home from accidents, fire, burglary, robbery, and assault.
 - (c) Discuss with your counselor the tips for online safety. Explain the steps individuals can take to help prevent identity theft.
 - (d) Discuss with your counselor the three R's of Youth Protection and how to recognize child abuse.

4. Show your family the exits you would use from different public buildings (such as a theater, municipal building, library, supermarket, shopping center, or your place of worship) in the event of an emergency. Teach your family what to do in the event that they need to take shelter in or evacuate a public place.
5. Make an emergency action plan for five family activities outside the home (at your place of worship, at a theater, on a picnic, at the beach, and while traveling, for example). Each plan should include an analysis of possible hazards, proposed action to correct hazards, and reasons for the correction you propose in each plan.
6. Plan and complete a safety project approved by your counselor for your home, school, place of worship, place of employment, or community.
7. Explain what the National Terrorism Advisory System is and how you would respond to each type of alert.
8. Learn about three career opportunities in the field of safety. Pick one career and find out the education, training, and experience required for this profession. Discuss this choice with your counselor, and explain why this profession might interest you.

Homework for all Merit Badges before class:

Please read and follow instructions in the Merit Badge Homework Guide.

Please read the BSA merit badge book.

Homework for Safety Merit Badge before class:

For **requirements # 1 abcd**, Scouts must research and make notes on each part and bring notes to class to discuss.

The Safety Merit Badge PowerPoint posted at

<http://sagamorebsa.org/htdocs/wordpress/wp-content/uploads/2020/03/Safety-MB-Powerpoint.pdf>

has excellent information.

For **requirement # 2 a**, please use the checklist posted at

<http://usscouts.org/mb/mb012.asp>

<http://usscouts.org/mb/docs/Home-Safety-Checklist.pdf>

Scouts must complete this Home Safety Checklist before class and bring it to class.

Please ask a parent to sign and date your Checklist to indicate completion.

For **requirement # 2 b**, meet with your family and draw a diagram of your home showing exits for all rooms and name a safe meeting place outside of your home in case of fire. Bring your diagram to class.

Here is an excellent reference for causes of home fires:

<https://firefightergarage.com/causes-of-house-fires/>

1. Cooking Accidents

Kitchen fires account for 48 percent of all house fires. That's 173,200 house fires per year. They most frequently occur due to overcooking or spilling of food and grease during food preparation.

Kitchen grease fires can start even without exposure to open flame. Spontaneous combustion of grease can occur at about 600 degrees Fahrenheit.

Statistically, the worst day of the year for cooking fires is Thanksgiving.

Common scenarios for cooking accidents include:

The spillage of oils onto flammable objects.

Build-up of grease and oils around, behind and under your stove or oven.

Overheating of food leading to combustion.

Forgetting to turn the stove off.

Dropping pots and pans off the stove onto the floor.

2. Heaters

Heaters are the second biggest cause of home fires in the United States after cooking fires. Home heaters are often placed too close to bedding, are located under curtains, or have clothing hung over them to dry. These sheets are heated by the heating devices to the point that they combust.

Space heaters (44%) are the biggest culprit for home heater fires followed by fireplaces (32%). Space heaters cause a disproportionate amount of deaths in this category: a whopping 86% of all deaths from heating equipment started with space heaters.

Failure to clean any heating appliance is also a big reason the fires start in the first place.

3. Intentionally Lit Fires

A whopping 31,305 house fires are intentionally lit every year. These fires are not necessarily all 'arson' fires. Arson fires are intentionally lit and intended to cause damage. Some intentionally lit fires are simply fun fires that got out of control!

The most high-risk period of intentionally lit fires is 6pm to midnight, followed by noon to 6pm.

Some explanations of intentionally lit fires include:

Curiosity ('fire play') in which the person just likes fires and is playing around.

To cover up a theft by burning the evidence.

To commit insurance fraud.

To burn trash.

4. Cigarettes (Smoking)

Despite smoking accounting for far fewer house fires than cooking accidents (18,100 vs. 173,200), it remains the leading cause of house fire deaths (590 vs. 550)! In other words, fires caused by cigarettes tend to be incredibly deadly!

Fires caused by smoking usually occur when a cigarette is not properly extinguished before being discarded. A cigarette but casually flicked into a shrub or pot can easily ignite dry leaves and rapidly cause a house to burn to the ground.

The most common locations where smoking-related home fires occur are the balcony or patio (18%) followed by the bedroom (15%).

5. Laundry Appliances

Washing machines and clothes dryers cause an average of 15,970 house fires per month and cause an average of 13 deaths. The bad news is these appliances cause a lot of fires, but the (relatively) good news is these fires cause far less deaths than other causes of home fires.

The main culprit of laundry fires is clothes dryers, which account for 92% of laundry fires. This is because dryers often ignite dust, fiber, lint and clothing within the machine. By contrast, washing machines usually catch alight due to electrical faults.

6. Flammable Liquids (Chemical fires)

Combustible liquids are all over the home. The most likely place you'll find combustible liquids is the kitchen cabinet, which is full of all sorts of chemicals.

Around 12,000 home fires every year are caused by flammable liquids in the United States.

Another common place where flammable liquids are located is the garage. There's a good chance you'll have gasoline containers lying around to refill your lawn mower. Make sure you store these liquids far away from anything that might cause the gas to ignite and ensure it's not exposed to heat extremes.

7. Barbeque Grills

Barbecue grills cause 8,700 fires per year. Of these fires, about 3,600 affect the structure of the buildings themselves while about 5,000 are entirely outdoors.

Predictably, the majority of these fires take place during summer months, with a spike during July.

Gas leaks are a major contributor to barbecue fires, although the risks of burning food to combustion and having barbecues near combustibles (such as dried grass) is serious.

To prevent barbecue fires, check for gas leaks before use, regularly clean your barbeque, and try to create a dedicated safe barbecuing space that is free of clutter and away from children.

8. Candles

Candles cause an incredible 8,200 house fires per year in the United States and are directly responsible for an average of 80 deaths annually.

It's also interesting to note that the most common days for candle fires each year are New Year's Day, Christmas Day and New Year's Eve.

Candle wax is incredibly hot and can dribble onto flammable surfaces such as tables and books. Furthermore, the open flame itself may flicker up and ignite nearby objects such as hanging drapes.

NFPA suggests that:

Candles should be supervised at all times. Do not leave a room with a lit candle.

Use flashlights rather than candles during blackouts.
Keep candles 1 foot away from any flammable surfaces.

9. Power Tools

Tools involving what NFPA calls 'hot work' cause approximately 2,000 house fires per year. Examples of tools in this category include soldering, welding and heat treating tools, as well as hot torches. The tool that is most likely to cause fires is welding torches.

Power tools usually cause fires when they are placed or operated too close to combustibles. A small minority of power tool fires are due to faults with the equipment.

While these tools more commonly cause fires in workplaces than homes, there is still a significant number of fires caused by the use of these tools within the home.

The employment of professionals to do work using power tools can help minimize fire risks.

10. Overloaded Power boards

Overloaded power boards. Make sure you don't 'piggyback' adaptors and power boards onto other power boards.

It might seem harmless, but in the United States over 5,300 house fires are caused each year due to overloaded power boards!

The best thing to do is to only use the allocated number of outlets on a power board and never add more power boards onto each other.

It's also usually best to buy power boards with overload protection. These power boards come with a fuse which cuts electricity to the board when overload or short circuit occurs.

11. Christmas Trees

Christmas trees are incredibly combustible. They are, of course, primarily made of wood! But the big risk of Christmas tree fires is that as the weeks leading up to Christmas pass the tree dries up fast. As the tree dries, it becomes more and more susceptible to fire.

Each year, an average of 160 Christmas tree fires occur in the United States, leading to an average of 3 deaths.

The leading cause of Christmas tree fires is faulty electricals, such as the Christmas tree lights sparking a fire.

Another key cause is candles being too close to the tree.

Christmas appears to be a particularly dangerous time for house fires. On top of the 160 Christmas tree fires, 780 house fires related to holiday decorations occur annually.

12. Faulty Electrical Wiring

Electrical fire due to faulty wiring is one of the more dangerous types of house fire because they occur when we least expect it. Electrical wire faults can occur in hidden spaces such as inside of appliances and by power points (often hidden behind couches!). They can also occur at unexpected times such as the middle of the night.

This may explain why electrical fires account for 19 percent of all home fire deaths despite only representing 10 percent of home fires.

13. Faulty Appliances

Electrical fires account for 10 percent of all house fires in the United States. That's about 51,000 house fires leading to 500 deaths annually.

Common causes of electrical appliance fires include:

Aged appliances. When appliances get old, the protective insulation around wires erodes and leaves wires exposed. Subsequent crossed wires will lead to fire.

Poor quality appliances. Often, the appliances you buy online are cheap and poor quality knock-offs that don't meet safety standards. Be sure to check if the appliance you buy online has met all safety standards.

14. Appliance Charging Accidents

The charging of appliances generates a lot of heat. When laptops and phones are charged on sheets or flammable surfaces, heat can build up quickly and lead to a fire. The air intake section of a laptop is usually on the bottom of the laptop. This can often be covered up when you place a laptop on a soft surface like a bed, leading to overheating.

For **requirements # 3 abcd**, please refer to the Safety Merit Badge PowerPoint posted by Sagamore Council BSA at

<http://sagamorebsa.org/htdocs/wordpress/wp-content/uploads/2020/03/Safety-MB-Powerpoint.pdf>

For **requirement # 3 c and d**, please refer to Safety Merit Badge PowerPoint posted at <https://www.slideshare.net/CharlesJolly1/safety-merit-badge-troop-504-82386092> slides 11, 12, 13, 14

For **requirement # 4** about exits from public buildings, make notes on the dates and places that you reviewed public exits with your family.

Please review the information about exiting a public building that is on fire:

<https://emergency.vt.edu/ready/guides/building-fire/building-fire-during.html>

For **requirement # 5**, fill in the chart below or expand to include other activities:

Activity	Possible hazards	Proposed actions for corrections	Reasons for proposed action
Worship			
Theater			
Picnic			
Beach			
Traveling			

For **requirement # 6**, Scouts must complete a home or community safety project before class and report on it during the class. Photos would be helpful.

Creating a home fire safety plan is a safety project but cannot be double-counted for both **requirements # 2b and 6**.

Checking the function of smoke and carbon monoxide alarms and replacing batteries in them in your own home or in the home of a relative would be a very good project.

Many websites show a variety of home safety projects. Here is one with many links:

<https://www.lifehack.org/525945/15-diy-things-increase-home-safety>

<https://www.schlage.com/blog/categories/2017/11/fall-home-safety-and-security-projects.html>

For **requirement # 7**, Scouts must read about the National Terrorism Advisory System (NTAS) at

<https://www.dhs.gov/ntas-frequently-asked-questions>

What is the difference between a NTAS Bulletin and a NTAS Alert?

What does this mean: “If You See Something, Say Something®”?

<https://blog.scoutingmagazine.org/2022/09/23/seesayday-is-september-25-heres-what-you-can-do-to-be-prepared/>

For **requirement # 8**, learn about 3 careers in safety. Research information on education, training, and experience required for one of these professions that interest you and report your findings to your counselor.

Find out about salary ranges if you can.

Examples of sources of information are

[https://learn.org/articles/What are Some Popular Jobs in the Field of Occupational Health and Safety.html](https://learn.org/articles/What_are_Some_Popular_Jobs_in_the_Field_of_Occupational_Health_and_Safety.html)

<https://www.bls.gov/ooh/healthcare/occupational-health-and-safety-specialists-and-technicians.htm#tab-1>