

A large, stylized illustration of orange flames with black outlines, rising from the bottom left and filling the upper half of the cover.

FIRE PREVENTION AND CONTROL

4-H
Member's
Manual



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▼ Fire Prevention and Control

Fire is a very helpful tool. It produces heat for cooking, warmth for comfort and light for eyesight. But when fire is out of control, it is no longer a helpful tool; it becomes an object of pain, sorrow and death. Because of fire's power, you should know how to prevent fires and what to do if one should occur. This project will help you learn how and why a fire starts, how it burns, how to put out a fire and how to make your own escape plan.

1 Chemistry of Fire

To have a fire, you must have **HEAT**, **AIR** and **FUEL**. When these three elements are together in the correct amounts, a fire starts.

Gases are all around us. Oxygen, hydrogen and carbon dioxide are in the air we breathe. Not all gases burn. Carbon dioxide is used to put out fires. Oxygen doesn't burn but is needed to support a fire. But some gases do burn. The natural gas used in kitchen stoves, water heaters and furnaces burns. So does butane in lighters and propane in torches. These gases can be very dangerous, and when heat and oxygen are added they burn—even explode.

Flammable liquids will not burn until they are vaporized or changed into gas. Two flammable liquids that you often see are kerosene and gasoline. Kerosene does not turn into a gas at room temperature, but it does when heated. Gasoline gives off fumes at normal temperature and is hazardous when exposed to the open air and a source of heat. Always be very careful of gasoline.

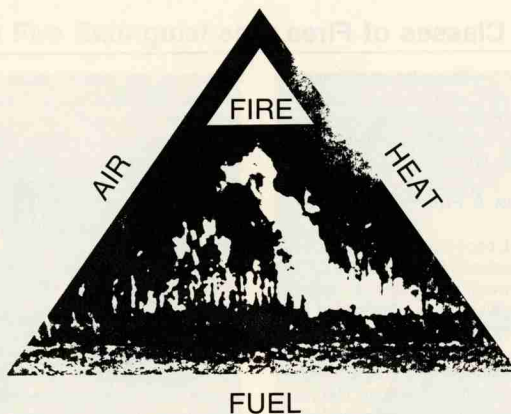
A block of wood does not burst into flames, but if it is ground into fine dust, it burns easily.

Did you know solids turn to gases and then burn? A piece of steel is hard to burn, but when it is in the form of steel wool it will burn easily. When solids are cut into fine particles and enough oxygen (from the air) surrounds these particles to

support combustion, then, with enough heat the solids will begin to burn. Heat of combustion is the amount of heat needed to cause a fuel to begin burning.

Combustible solids not only burn more readily if finely divided, but their position also makes a difference. Wood in a vertical position burns more rapidly than wood in a horizontal or flat position.

The three elements—heat, air and fuel—form the fire triangle. If one part of the fire triangle is removed, the fire will go out.



In order to start or to continue to burn, any fire needs all three parts of the fire triangle. This chemical reaction is known as **combustion**.

Electrical fires are prevented by using appliances and equipment properly and by keeping combustible materials away from these appliances and equipment.

Electrical fires are extinguished by turning off the electrical power and smothering the fire with carbon dioxide or dry chemicals. Never use water. Water will conduct electricity and you could easily be electrocuted. Fighting electrical fires with water is a "once in a lifetime experience!"

Class D Fires

Metals which burn are Class D fires. You have seen these fires. When a flash picture is taken with a flash cube, a Class D fire occurs. Metal is burned inside the flash cube. Have you seen fireworks, the kind used on the Fourth of July? Fireworks are burning metal compounds.

This type of fire is uncommon around the home and farm. However, if the flash cube were improperly constructed, damaged or used incorrectly, it could cause a fire. The same is true with fireworks. Careless use of fireworks causes many injuries and costly fires each year.

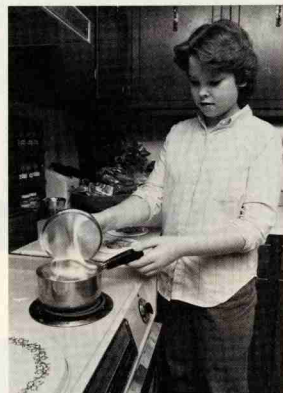
Special chemicals which coat the burning metal are used to extinguish metal fires.



3 Fire Extinguishers

Fire extinguishers are all around your home and farm. How many can you name? Examples are water hoses, pails or waste containers for water, brooms, shovels and rakes, sand or dirt, blankets and baking soda. If you have a grease fire in a frying pan, would a tight-fitting cover be a good fire extinguisher? What other fire extinguishers can you think of and how could they be used to put out a fire? You need to be aware of these fire extinguishers that you have all around you and know when and how to use them. Can you think of a situation when a coat that you might be wearing could serve as a fire extinguisher?

When we think of fire extinguishers we usually imagine tanks or cans mounted on the wall, sitting on a shelf, or attached to a tractor. These are commercial fire extinguishers designed for fire fighting. There are many kinds, but



A fire that occurs in a pot on the stove can be put out easily by covering with a lid.

there are four major types used in and around the home and on the farm.

Type A Use on Class A fires — wood, paper, grass, etc.

Type B Use on Class B fires — oil, gas, paint, etc.

Type C Use on Class C fires — electrical

Type D Use on Class D fires — metal

Combinations B-C; A-B-C

Unplug appliances that are smoking or on fire. Never reach across burning appliances.



Here are three types of fire extinguishers — (from left) A, A-B-C, and B-C.

Quality fire extinguishers should be purchased from reputable dealers. Read the label before purchase. Is the extinguisher approved by the Underwriter's Laboratories, Inc., or the Factory Mutual Engineering Corporation? If not, don't buy it! Is it the right type for your needs? Which symbols does it carry- A, B, C? Is it the right size?

You see fire extinguishers labeled 4-A: 16-B: C. What does this mean? First, it can be used on A, B or C fires. The 4 and 16 indicate that it will extinguish 4 square feet of a Class A fire or 16 square feet of a Class B fire. Could you determine the value of a fire extinguisher from this information?

Finally, check how to use the fire extinguisher. Is the mechanism safe and easy to use? Or will the fire be out of control before you can make it work?

Type A Fire Extinguishers

These extinguishers are normally filled with water. The water may contain an anti-freeze or a dissolved

salt. Compressed air or carbon dioxide gases create a pressure, causing the water to spray. The most common size is 2½ gallons.

Type A-B-C Fire Extinguishers

The A-B-C fire extinguisher is safe for kitchen and household use. These extinguishers may be used on three classes of fires. A-B-C type extinguishers should be UL approved and have at least a 2A:10-B:C rating.

Type B-C Fire Extinguishers

There are several kinds of chemical extinguishers. Carbon dioxide and halogenated compounds are used for Class B and C fires. Since they discharge within 8 to 25 seconds, most of these extinguishers can be used on small Class A fires.

With electrical fires, always shut off the electrical appliance or equipment or the fire may restart after the effects of the extinguishers are gone.



Using Fire Extinguishers

Fire extinguishers work in different ways. Always read the instructions on the extinguisher before it is used. Don't wait for a fire to start to learn how to use the extinguisher! Learn to use it now.

With Class A fires, direct the stream at the base of the fire, working from side to side or around the fire.

With Class B fires, use a "fanning" action, rapidly moving from side to side beginning well in front of the fire and beyond the sides.

With Class C fires, aim the extinguisher at the electrical appliance or equipment which is on fire.

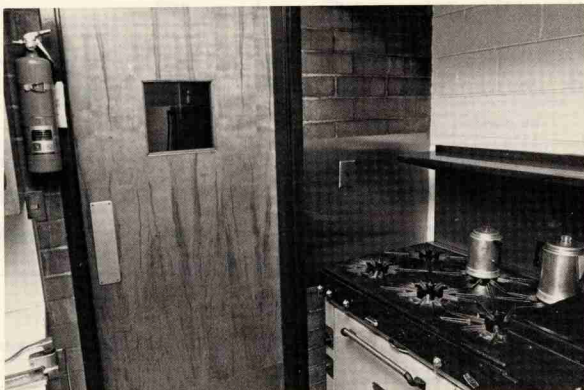
Always have fire extinguishers recharged immediately after they have been used. Forgetting this could result in a costly fire the next time. Reliable fire extinguisher dealers and many fire departments provide this service.



When using a fire extinguisher on a Class B fire, use a "fanning action." Spray from side to side beginning in front of the fire and beyond the sides.

Locating Fire Extinguishers

Fire extinguishers should be located near, but not in, areas where the fire danger is high. Some of these places are the kitchen, furnace room, garages, tractor and fuel storage areas. Can you think of other dangerous areas in or around your home or farm? Fire extinguishers should be located where they can be easily seen and reached, NOT in the back of the broom closet, behind the stove or in a locked cabinet!



A fire extinguisher should be placed near an area where it will be needed.

▼ Worksheet

Fire Extinguishers and Their Uses

- 1** List five common items found around a home or farm which can be used to extinguish fires. Give an example of how each could be used.

Tool or Item	Example of Use
1 _____	_____
2 _____	_____
3 _____	_____
4 _____	_____
5 _____	_____

- 2** Study the label on a fire extinguisher and then fill in the following blanks.

Manufacturer _____ Type _____

Charged weight or size _____ Date of Inspection _____

Has the extinguisher been used? _____ How can you tell? _____

On what kind of fires can this extinguisher be used? _____

How is this fire extinguisher operated? _____

- 3** You will be shown three to five fire extinguishers numbered 1-2-3-4-5. Which of these extinguishers could be used:

- on a gasoline mower fire _____
- on a trash barrel fire _____
- on a kitchen grease fire _____
- as an all-purpose extinguisher for the home _____
- on a fire in a car or on a tractor _____
- on a bed fire _____
- on an electric motor fire _____
- for a Class A fire _____

- 4** Name one place in your area where you can purchase fire extinguishers and have them serviced.

- 5** If you could purchase three fire extinguishers for your home or farm, what types would you purchase and where would you locate each one?

Type	Location
1 _____	_____
2 _____	_____
3 _____	_____

▼ Extra Project

- 1 Develop a poster showing the types of fire extinguishers and use of each.
- 2 Develop a list of businesses in your area who sell and service fire extinguishers.
- 3 Make a chart listing 6 to 10 types of fire extinguishers sold in your area. Indicate type, size, price and cost of refilling each.

Type	Size	Original Cost	Refill Cost
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



Fires produce heat, smoke and dangerous gases.

Hazardous Materials

Use caution with hazardous materials. Hazardous materials can start fires and cause burns. Some examples of common dangers are:

▼Children getting too close to open fires, heaters, or charcoal grills. Their clothing might catch on fire.
▼Adults working over or around open fires while wearing flammable clothing.

▼Cigarettes falling off ashtrays onto paper, floors, furniture or bedding.

▼Dropping hot cigarette butts in dry grass, trash or waste containers.

▼Placing hazardous materials too close to a source of heat (kitchen range, space heater or fireplace).

You can spot many electrical problems and have them corrected. Fuses or circuit breakers should match the wiring size. If fuses blow or circuit breakers trip, there is a problem. If you can't find the problem, have an electrician locate and correct it. Overloaded circuits cause hot wires and fires.

The table on page 12 should help you determine if the proper size fuse or circuit breaker is used.



Remove things that will burn from the hearth before starting a fire.

Too many appliances plugged into a wall outlet can cause overheating and result in a fire.

Electricity

Electricity is a major cause of fires. It is estimated that there are 75,000 home fires each year started by faulty electrical wiring, appliances or incorrect use of wiring. It takes special knowledge to check many electrical installations around the home or farm. If you have any question about the safety of any electrical wiring or appliance, have it inspected by a qualified electrician. Lights that dim or flicker and motors which spark, overheat or start with difficulty are all clues to problems. Call an expert to correct the problem.



Check the light switches and wall outlets. Are the covers on? Is there any evidence of overheating? If there are small children in the house, insert childproof plugs into unused outlets.

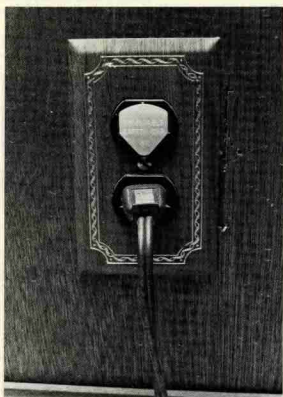
Extension cords are another source of danger. Check their condition and locations. Are they brittle, cracked, under rugs, in locations where they are stepped on, bent, pinched, or damaged in any way?

Are cords on electrical appliances in good condition? Three-prong plugs must always be used in three-prong outlets.

All electrical appliances, devices and materials should be UL approved. Using unapproved electrical items is an invitation to a fire.

Use waterproof or weatherproof electrical devices in all areas which are or may be wet. Water and electricity are a bad mixture. You do not need that type of shocking experience!

Dustproof or explosive-proof fixtures should be used in areas where dust may collect. Woodworking shops, feed rooms, grain storage areas and hay barns are dangerous dust locations.



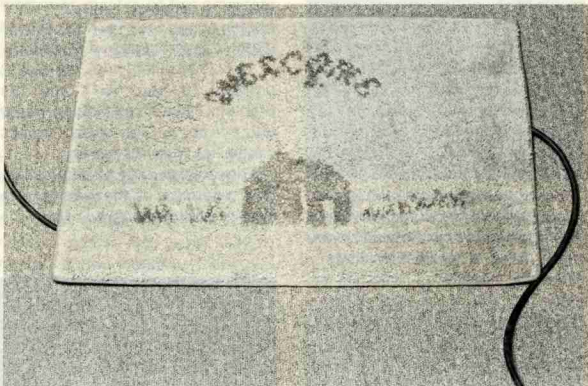
Install safety caps in outlets to prevent younger children from sticking pencils, pens or other sharp objects inside.

Proper Fuse Protection for Copper Wire

Wire Size Number	Maximum Fuse Size-Amps	Thickness or Diameter of Wire	How Wire Is Used
14	15	1 penny	Lights and outlets
12	20	1 nickel	Lights and outlets
10	30	2 dimes	Water heater and clothes dryer



Electric cords that are frayed or have exposed wire should be repaired or replaced.



Never use an extension cord under rugs or carpet that must be walked on.

Summary

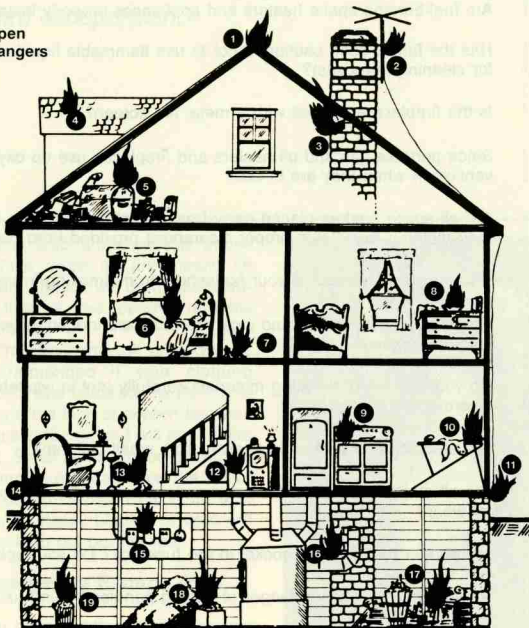
Fires find enough places to happen without our help. Survey your home and/or farm. Locate the potential fire hazards and correct all problems. Fires in fireplaces, dinner by candlelight, and July Fourth fireworks are enjoyable uses of fire, but there is nothing enjoyable about house fires. Do what you can to prevent them.

▼ Identifying Common Fire Hazards

Inspectors, use this "practice house" to sharpen your eye. It will help you spot any real fire dangers in your own home.

Common Fire Hazards in the Home

- 1 No lightning rods
- 2 Wrong location for TV antenna
- 3 Defective chimney
- 4 Unapproved roofing material
- 5 Rubbish in attic
- 6 Smoking in bed
- 7 Oily rags and mop
- 8 Flammable cleaning fluid
- 9 Grease fire; no fire extinguisher
- 10 Careless use of electric iron
- 11 TV antenna not grounded
- 12 Electrical outlet overloaded
- 13 Careless smoking
- 14 No fire stop
- 15 Faulty fuses
- 16 Defective flue
- 17 Rubbish in basement
- 18 Accumulation of ashes in combustible container
- 19 Gasoline stored in can not safety approved



▼ You are going to be shown an area with 12 to 15 easily identified fire hazards. Survey the area and identify at least 10 hazards. List them below.

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____
- 6 _____
- 7 _____
- 8 _____

- 9 _____
- 10 _____
- 11 _____
- 12 _____
- 13 _____
- 14 _____
- 15 _____

Complete a home and/or farm fire hazard report for your home or farm with your parents or other adult. Correct the fire hazards located or urge that they be corrected if you are unable to correct them. Take the completed report to the next meeting or fire safety class.

▼ Extra Project

As a community service, survey other homes or farms in your neighborhood. Why not make this a club project?

▼ Home Fire Inspection Blank

- ☐ Are fuel-burning space heaters and appliances properly installed and used?
- ☐ Has the family been cautioned not to use flammable liquids like gasoline to start or freshen a fire (or for cleaning purposes)?
- ☐ Is the fireplace equipped with a metal fire screen?
- ☐ Since portable gas and oil heaters and fireplaces use up oxygen as they burn, do you provide proper ventilation when they are in use?
- ☐ Are all space heaters placed away from traffic? Are children and older persons cautioned to keep their clothing away? Are proper clearances provided from curtains, bedding, etc?
- ☐ Do you stop members of your household from smoking in bed?
- ☐ Do you check to see that no cigarette butts are lodged in upholstered furniture where they can smolder unseen at night?
- ☐ Do you dispose of smoking materials carefully (not in wastebaskets) and keep large, safe ashtrays wherever people smoke?
- ☐ Are matches and lighters kept away from small children?
- ☐ Are all electrical cords in the open and not run under rugs or over hooks? Are they checked routinely for wear?
- ☐ Is the right fuse in each socket in the fuse box? Do you replace a fuse with one of the same size?
- ☐ Do you understand the danger of putting pennies behind fuses?
- ☐ Children often are burned when reaching over the stove for cookies, etc. Do you store these items in a safe place?
- ☐ Do you keep the basement, closets, garage and yard clear of combustibles like papers, cartons, old furniture and oil-soaked rags?
- ☐ Are gasoline and other flammable liquids stored in closed containers (never glass jugs, discarded bleach or milk containers) and away from heat, sparks and children?
- ☐ Is paint kept in a tightly closed metal container? Are old paint rags discarded correctly?
- ☐ Are furnaces, stoves, etc. far enough away from combustible walls and ceilings and in good repair?
- ☐ Is your heating equipment checked yearly by a serviceman?
- ☐ Is the chimney cleaned and checked regularly?
- ☐ Are there enough electrical outlets in each room and special circuits for heavy duty appliances, such as heaters and air conditioners?
- ☐ Do your appliances carry the seal of a nationally known safety testing laboratory such as Underwriters' Laboratories (UL®) or Factory Mutual (FM®)?

▼ *"You should know what to do if your house catches on fire. You and your family should have a fire escape plan."*

5 Fire Escape Plans

Have you ever had a fire drill at school? Sure you have, maybe several each year. But have you ever had a fire drill at home? Probably most of you never have. You spend 6 to 8 hours a day, 5 days a week, about 180 days a year in school. But you spend 10 to 15 hours or more at home each day, 365 days a year. Doesn't it make sense to have fire drills at home?

Despite all our efforts to prevent fires, they still can and do happen. What would you do if you awoke during the night to the strong smell of smoke? Would you do all the right things? Every family should have a plan of action to first save lives; second, to save property. All members of the family should help plan and understand their escape plan.

The unfortunate person whose clothes catch on fire should lie down. The fire will burn more slowly than if the person remains standing.

The drop and roll procedure is recommended if your clothing should ever catch on fire. Roll slowly and the lack of oxygen between you and the ground will put the fire out. Small areas can be put out by clamping your hand over the fire for a second or two. Rolling up in a carpet, heavy blanket or coat will also help put out the fire.

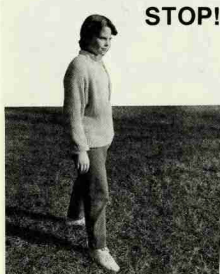
Emergency Escape Plan

The major parts of an emergency fire escape plan for your home are:

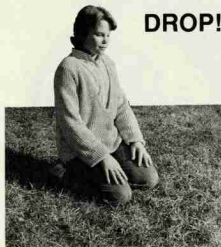
▼ All school-aged children and adults should know the two best escape routes from every room in the house.

▼ Develop a plan to see that all members of the family are informed rapidly in case of a fire.

STOP!



DROP!

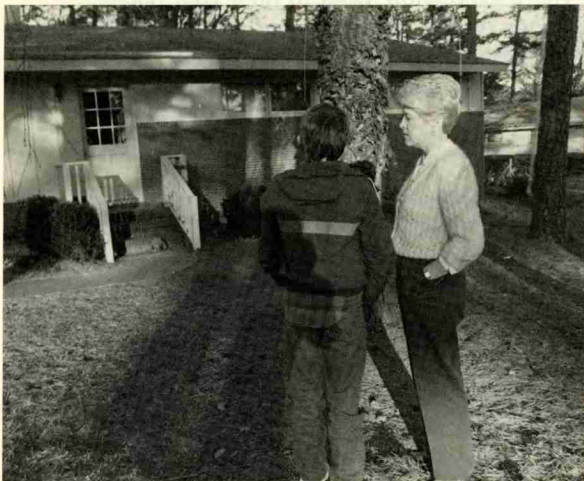


ROLL!



Blankets, coats or other materials can be used to put out clothing fires.

If your clothes are on fire, **STOP**, **DROP** to your knees, **LAY** as flat as possible and **ROLL**.



▼ Develop a plan whereby teenagers and adults understand their responsibility in getting younger members of the family out of the home.

▼ Arrange a meeting place for all members of the family so they can be accounted for after leaving a burning building.

▼ Make certain that windows and screens can be easily opened, removed or broken.

▼ Provide a means of escape from the second floor; ladders, ladder ropes, ropes, etc.

▼ Have an arrangement with neighbors so that you can reach them in an emergency at any hour of the day or night.

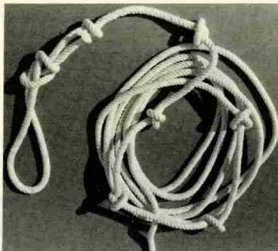
▼ Hold regular family fire drills.

Other Precautions and Practices

Plans to control the seriousness of the fire are just as important as the escape plan. People have died in fires because they did not know simple precautions or life-saving practices. They didn't break a window to escape. They opened the wrong door. They went back into a burning

building without a good reason. Here are some clues to help you stay alive:

▼ Get out and call the Fire Department from the closest phone outside of your home. **DO NOT** return to the burning building. Know the fire department's number. Do you dial 911, 0, or some other number? Have this number posted by all telephones. Take a quick and easy way out. Close the doors or windows you pass through. If the window does not close easily, leave it and get out as fast as you can.



If you sleep on the second floor, a rope with knots tied 8 to 12 inches apart can be used to help you escape.

After escaping from the burning house, meet other family members at your planned location. Never go back into a burning house.



You should have an escape plan to avoid being trapped upstairs.



If a fire starts in your home, get out immediately. Go to a neighbor's house and call your emergency number.

▼ If there is smoke in the room or if you know a fire is burning out in the hall or another room, crawl or creep out of the house. Stay low, the air supply will be better near the floor. Touch a closed door with the back of our hand. If it is warm, don't open it, as the fire will rush into the room.

▼ Know how to break a window without injury to yourself. What item would you use? How would you protect your hands, arms, face and eyes? Grab the item that you plan to use with a towel or blanket which will cover your hands and arms. Turn your face away from the window and close your eyes.

▼ Know where your fire-fighting tools are located so you can direct an adult to them in case of a fire. Types of materials are fire extinguishers, water hoses, buckets, fire proof rugs and water sources.

▼ Stay calm. Think before you act. The best way to stay calm is to be informed. If you know what to do and have practiced home fire drills, your chances of staying calm and doing all the right things in case of a fire are greatly increased.



When crawling down a hallway to get out of a burning house, test closed doors as you pass. If a door feels hot to the back of your hand, do not open it.

Fire Fighting Requires Judgment

It's a small fire in the frying pan, on the ironing board, in a chair or wastebasket. Or it's a big fire—it's 2:00 a.m. and you awake to a smoke-filled room. Or you look downstairs and the entire room is on fire. Or you come home late at night and flames are coming out of the windows or through the roof. What actions would you take in each case? Would they be the same? Would your actions be the same if you were home alone as it would be if other family members were in the house?

Sometimes the correct procedure would be to fight the fire first and then call the fire department (as in a small fire). Another time the best judgment would be: first, call the fire department, and second, fight the fire. **Other times, whenever there is any serious risk to people,** escape from the building first, call the fire department, and then do what you can to control the fire without risking injury or death to yourself or others.



Use a chair or large toy to break out a stuck window to aid in your escape.

▼ Develop a Fire Escape Plan

- 1** List eight parts of a good home fire escape plan.

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____
- 6 _____
- 7 _____
- 8 _____

- 2** List four precautions or practices which can reduce the seriousness of a home fire.

- 1 _____
- 2 _____
- 3 _____
- 4 _____

- 3** The local telephone number to call to report a fire to the fire department is _____.

- 4** Prepare a fire escape plan with two escape routes from each room. Use the floor plan in this section.

- 5** Draw a floor plan of your home showing two escape routes from each room:

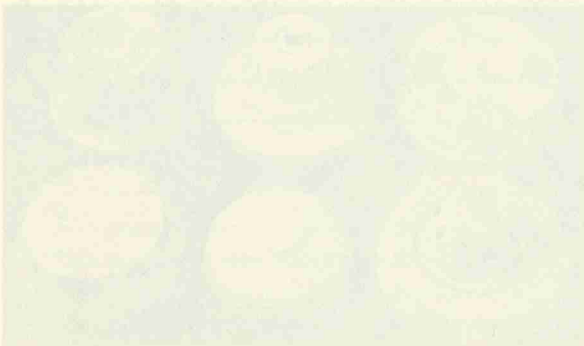
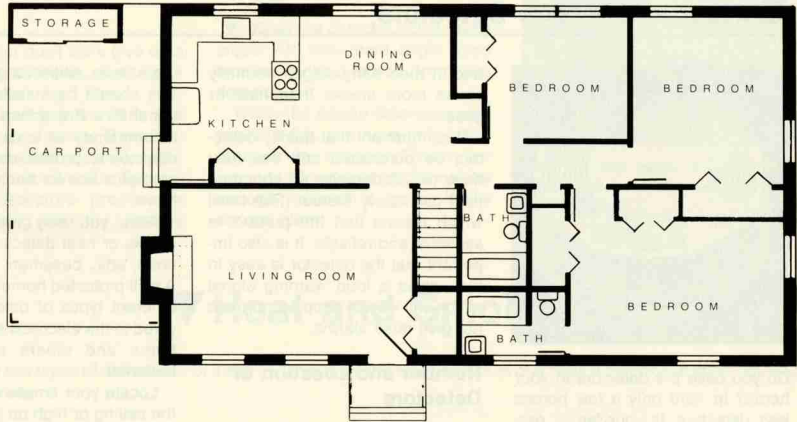
- detailing the responsibility for assuring that young children are removed.
- identifying the out-of-house meeting place for family members.
- describing the method of contacting neighbors.

- 6** Give a written and/or oral report of your experience with a home fire drill.

▼ Extra Project

Develop a model of your home showing rooms, doors and windows. Using two colors of yarn, show both the "best" and "alternate" escape routes from each room. Display your Model Fire Escape Plan at a 4-H meeting, fair and/or other events.

▼ Develop a Fire Escape Plan for This House.



▼ *"A detector can alert you if too much heat, gas or smoke is present. Make sure your detector is mounted in the right location and that it works."*

6 Heat and Smoke Detectors



Do you have fire detectors in your home? In 1970 only a few homes had detectors. Is your family protected? Do you have detectors? Are you a "have" or "have not?"

Families with detectors are much more likely to survive a home fire. Your chances of surviving a home fire are 30 to 50 percent better if you have **working** detectors in your home. But for detectors to do the most good you must have the right type located in the right places and they must be in working condition.

Types of Detectors

There are all types of detectors. There are heat, gas and smoke detectors and there are different types of each. Some operate on batteries; others are wired to the electrical circuits within the house. Each type of detector has its advantages and purposes.

However, **smoke detectors** with **ionization** or **photoelectric alarms** are most effective because most home fires are of a smoldering type

and in their early stages normally cause more smoke than heat or gases.

It is important that quality detectors be purchased and that they have the Underwriter's Laboratory (UL) or Factory Mutual (FM) label which means that the product is sensitive and reliable. It is also important that the detector is easy to test, gives a loud warning signal which will awake people and does not give false alarms.

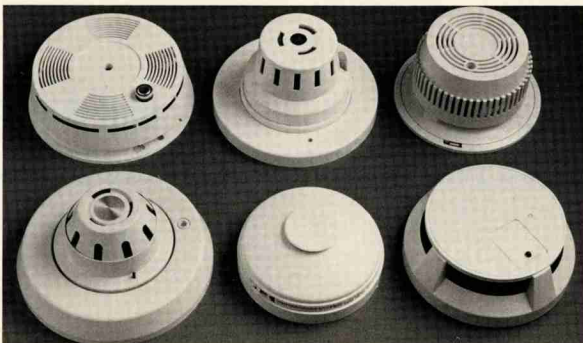
Number and Location of Detectors

All homes should have at least one smoke detector. This single detector should be located on or near the ceiling in the hallway near the bedrooms. If there are bedrooms in more than one location of the house, at both ends of the house or on

more floors, additional smoke detectors should be installed. The National Fire Prevention Association recommends at least one smoke detector to protect each sleeping area plus one for each level of the home.

Also, you may wish to locate smoke or heat detectors in the kitchen, attic, basement and garage. A well protected home should have different types of detectors, some wired to the electrical system of the home and others operated by batteries.

Locate your smoke detectors on the ceiling or high on the wall. The best location is the center of the ceiling at the top of a stairway or hallway entrance leading to the bedrooms. Ceiling-mounted detectors should be at least 4 inches from the wall;



Smoke and heat detectors come in a variety of shapes and sizes. Does yours look like one of these?

wall-mounted detectors should be from 4 to 12 inches from the ceiling. Smoke is slow going into corners.

Detectors normally come with installation instructions. Follow those directions. If you have other questions and problems about detectors, your local fire department will be able to assist you.

Keep Your Detector Working

Detectors that don't work give us a false feeling of safety. Keep your detector working. Read your owner's manual to learn when and how to test your detector. Then do it!

Check the power source for your detector each week. Battery operated detectors produce a distinct warning when the batteries

are getting weak. Replace weak or dead batteries.

Check your detector after every trip.

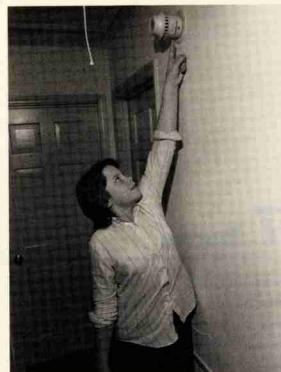
Helpful hints to keep your detector working:

▼ Don't paint it.

▼ Clean it once or twice a year. Vacuum the openings to remove dust and dirt. If you wash the outside surface, don't get water into the detector.

▼ Keep the detector out of drafty areas. Air movement might keep smoke or heat away from the detector.

When the smoke detector warns you of a fire, you have only a few seconds to escape. Those few seconds of warning might not be enough without a good family escape plan.



Your detector should be mounted on the wall or ceiling near the bedrooms.

▼ Heat and Smoke Detectors

- 1 Name two types of detectors. Put a star (★) in front of the type you would purchase if only one is to be installed in a home.

1 _____ 2 _____

- 2 If only one smoke detector were to be installed in a home, would you locate it in the:

_____ Kitchen _____ Family room
 _____ Hallway leading to the bedrooms _____ Front entry way

- 3 If a smoke detector is installed on a ceiling, it should be located at least _____ inches from the wall; if installed on a wall it should be at least _____ inches from the ceiling.

- 4 List four rules of installation and maintenance to ensure that your smoke detector will operate properly.

1 _____
 2 _____
 3 _____
 4 _____

- 5 On a floor plan of a home, indicate where and what type of detectors you would recommend installing. See copy of floor plan.

- 6 Demonstrate your ability to determine if a detector is working.

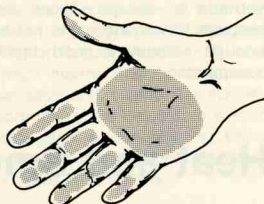
“There are different types and classes of burns. If you know what to do to a burn, you can help reduce pain.”

7 Burns

Burn injuries are the result of fire, chemicals, hot liquids, hot objects, electric shock, or friction. Burns are classified by the amount of body tissue damage. First degree burns leave the skin reddened. Second degree burns develop blisters. Third degree burns injure tissues and skin growth cells below the skin surface. Because third degree burns destroy the nerve endings, the burn victim will feel no pain in those areas.

Type of Burn

First Degree

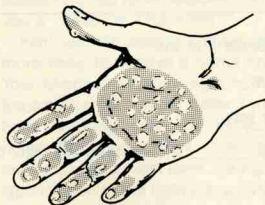


What to Do

Run cold water over the burn until the pain stops, apply cold cloths, or put the burned area in cold water. Dry by patting. Do not use butter or margarine because they contain salt, which burns the wound. Bandage with a sterile dressing. Wrap the burns with a clean, dry cloth. This reduces pain by blocking air from reaching the wound and prevents infection of the injury.

Type of Burn

Second Degree

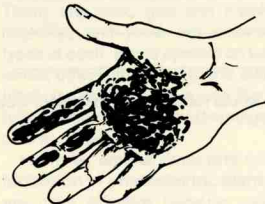


What to Do

Everything, including the helper's hands, must be clean to prevent infection. Apply cold water as with the first degree burn. Do not break any blisters that have formed. Do not use an antiseptic ointment. Lightly wrap the area with a clean, dry nonsticking cloth. Second degree burns over as little as 10 percent of the body are dangerous. Treat for shock. Get medical attention.

Type of Burn

Third Degree

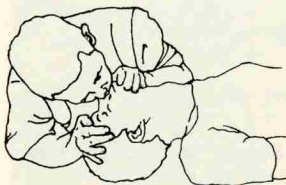


What to Do

The best first aid for third degree burns is to keep the burn wounds clean, treat the victim for shock, and get medical help fast. Remove loose clothing but leave any clothing that may be stuck to the skin. Lightly wrap the burned area with a clean, dry nonsticking cloth, plastic bag, or plastic wrap. Keep the victim lying down while he is being transported to a doctor or hospital.

▼ Special Burns

Electric Shock



What to Do

Make sure the current is cut off before getting near the victim. Keep others away. In the home, turn off the current by: 1) removing the fuse, 2) flipping off the main current switch at the fuse box, or 3) unplugging the electrical cord to the appliance that may be causing the electrical shock. Electricity from fallen power lines may travel through the ground for as much as 15 feet.

When it is safe, give artificial respiration if needed. If breathing is normal, treat the victim's burns in the same way as for other burns, depending upon how bad they are. Get medical help.

Wood-burning stoves are used to heat many homes.

8 Alternate Heat Sources

Wood-Burning Stoves

The wood-burning stove has gained a great deal of popularity in many homes today as a method of saving fuel costs. Used properly, the stove provides a home with cozy warmth and more heat than the less efficient fireplace.

If you have a wood stove in your home, use it with respect and obey the following:

▼ Never use gas or kerosene to light a fire in the stove. Many stoves have exploded in victims' faces.

▼ Avoid putting water-soaked wood in a hot woodstove in order to prevent the water from contacting the sides or grate and cracking.

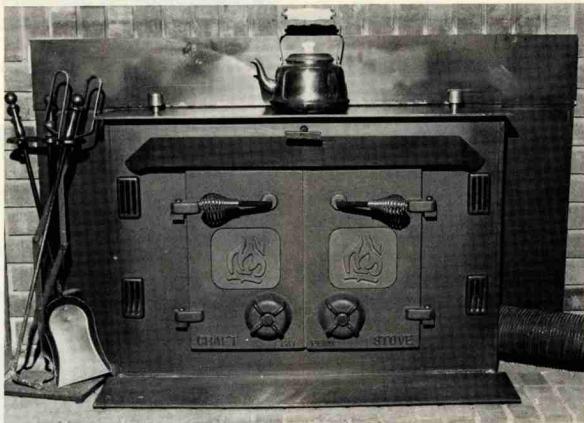
▼ Keep your heaters and pipes in good repair. Fittings should be checked daily during the heating season.

▼ Use leather gloves when putting in wood or removing the ashpan to prevent burns.

▼ Place ashes in a metal bucket and allow to cool for at least a day before emptying.

▼ Never play around a hot wood stove.

▼ Keep paper, trash and other material that will burn off the top or sides of a wood stove.



Kerosene or Space Heaters

A portable kerosene heater can be used during waking hours to take the chill off an area without starting up the central heating system. However, if placed too close to combustibles, such as paper, curtains and other readily flammable household materials, they can produce fires.



Never place kerosene or other space heaters near combustible items, such as curtains, walls, furniture or paper.

Follow these practices when a portable kerosene heater is being used:

- ▼ Use only 1-K grade kerosene.
- ▼ Always refuel the heater outside and with the unit off.
- ▼ Place heater at least 3 feet away from curtains, drapes, bedding, books, paper, furniture or other flammable material.
- ▼ Never play near the heater or go near it without adult supervision.

Your fire department is very important to you and your family's safety.

9 Your Fire Department and You

This lesson is designed to help you understand the importance of being able to contact the fire department quickly in case of fire and to give directions accurately to the dispatcher. You will also learn about the basic operation of your local department.

Objectives

- ▼ Post the fire department's telephone number on or near all telephones you might use to report a fire.
- ▼ Practice, orally, giving the address and directions you would give to a fire station dispatcher to enable the fire department to locate your home.
- ▼ Locate the sources and amount of water available to fight a fire at your home or farm.
- ▼ Make a list of 10 characteristics of your fire department.

Before You Need the Fire Department

An understanding of fire, the removal of fire hazards, inspections, the use of fire detectors, development of escape plans and availability of fire extinguishers do not mean that some day you will not need the services of the fire department. When you need the fire department, you will need it right then and lost time is costly.

There are things you should do before you need the fire department to fight a fire. What are some of these things?

- ▼ Post the fire department's number by all telephones.
- ▼ Determine how you would call the fire department if you could not use the telephone.
- ▼ Know where your fire station is located and be able to explain to the dispatcher how to reach your home.





Leave fire fighting to a fireman who has proper clothing and equipment.

▼ Explain to the fire department the type and seriousness of the fire.

▼ Know the source(s) of water to fight a fire. If you live in a city, know the location of the nearest hydrant. If no hydrants are available, know what other water supplies are available, such as wells, ponds, etc. If water supplies are limited, the fire department should know this.

▼ If your home is off of a main street or road, down a long driveway or not visible from the road, make plans to have someone go out to the main street or road to direct the fire trucks to the fire.

▼ Learn to use your fire department to prevent fires, not just to fight fires. Call or visit your fire department if you have questions about ways to make your home more fire safe. Many fire departments provide a service of visiting homes and businesses to conduct inspections and give suggestions of how to make your place more fire safe. Many fire insurance companies provide these same services.

Types of Fire Departments

There are three types of fire departments. There are professional fire departments, which are staffed with full-time trained paid fire-fighters. If you live in a rural area, town or small city, you might have a volunteer fire department with unpaid firemen. These firemen are also trained, but they work at other jobs and are normally not paid as fire-fighters. Between these two types is a combination fire department with a small paid full-time staff supplemented by a group of volunteer fire-fighters. Which type does your community have?

At a full-time professional fire department, when a fire call comes into the fire station, a fire-fighting unit is immediately sent to the fire. The fire-fighters are at the station.

At a volunteer station, the fire call may come into a police station, home or some other location. A siren, bell or horn is blown to inform fire-fighters of the fire. They then rush from their jobs within the community to the fire station to respond

to the fire. In the better equipped and organized volunteer departments, the volunteers use radio monitors at home and work. They can then go directly from home or work to the location of the fire. Naturally, there must be some organization so that some of the fire-fighters will first go to the fire station to get the fire-fighting equipment.

At the Fire

The fire-fighter's first job at any fire is the protection of human lives. This not only means people who might be in the burning building, but also other people who are at the scene of the fire, including the fire-fighters.

Fire-fighting teams always have a fire chief. It is his responsibility to assign specific jobs to the other fire-fighters. This may include rescuing people, pets and personal property, crowd control and protection of other buildings, in addition to fighting the fire. Fire-fighting teams must be well trained and disciplined to do the task assigned. Not everyone can drive the truck or man the water hose!

Support Your Fire Department

Your call to the local fire department puts into action an organization of trained fire-fighters who have the knowledge to prevent, control and fight fires. Their work is often dangerous. They must attend meetings, school, training sessions and drills on a regular basis. They are always learning about new fire-fighting techniques and better ways to prevent fires. And, there never

seems to be enough dollars for the amount and kind of equipment needed.

While tax dollars fund all or part of most fire departments, volunteer departments often find it necessary to raise part or all of their necessary funds. Various fund-raising activities are used, such as socials, suppers, carnivals and card parties.

Get to know your fire department. Know its needs. Support your fire department. Help them obtain the

resources necessary to provide quality fire protection to your community. If you are really interested in supporting your local fire department, you might want to consider becoming a fire-fighter yourself in the years ahead.

▼ Your Fire Department

- 1 The telephone number of your fire department is _____.

Is the number posted by your telephone(s)? _____ Yes _____ No

The address or location of your fire department is:

The directions from the fire station to your home are:

- 2 The best sources of water to fight a fire at your home are:
3 Your local fire department is a _____ type department.

The name of your fire chief is _____.

The department has _____ fire-fighters.

Fire calls are received at _____.

Fire-fighters are informed of the fire by _____.

- 4 Three major pieces of fire-fighting equipment owned by your fire department are:

1 _____ 2 _____

3 _____

- 5 Your fire department is financed by:

- 6 The major needs of your fire department are:

1 _____ 2 _____

- 7 In addition to fighting fires, what other services are provided by your fire department?

1 _____

2 _____

3 _____

Your local fireman is ready
to assist you in fighting
fires or explaining how to
prevent them.



Fire Prevention and Control

4-H Member's Manual

YEAR

YOUR NAME

BIRTH DATE

ADDRESS

COUNTY

PARENT'S NAME

YOUR 4-H CLUB OR GROUP

YEARS IN 4-H WORK

4-H LEADER'S NAME

ADDRESS

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