



What Is This Module About?

Is your home safe from potential fire hazards? What injuries and accidents can result from careless handling of fire? What precautionary measures or safety tips should family members take to prevent fire accidents or injuries at home?

This module will discuss the different sources or causes of fire in the home, the effects of careless handling of fire, and the precautions that family members should take to prevent fire and fire-related injuries.

This module is divided into three lessons:

Lesson 1 – *Common Causes of Fire at Home*

Lesson 2 – *Fire-Related Injuries at Home*

Lesson 3 – *Fire Prevention and Safety Tips*



What Will You Learn From This Module?

After studying this module, you should be able to:

- ◆ identify the common sources and causes of fire in the home;
- ◆ explain the different fire-related injuries; and
- ◆ demonstrate precautionary measures and safety tips to prevent fire.



Let's See What You Already Know

Before studying this module, answer the questions below to determine how much you already know about the topic.

Write the letter of the correct answer in the blank before each number.

- ____ 1. When does fire occur?
 - a. when soil is mixed with fuel
 - b. when heat, fuel and oxygen combine
 - c. when water comes in contact with air
 - d. when fuel is mixed with water
- ____ 2. Which type of fire involves cloth, rubber or paper?
 - a. Class "A" – ordinary combustibles
 - b. Class "B" – flammable liquids
 - c. Class "C" – energized electrical equipment
 - d. Class "D" – manually-operated equipment
- ____ 3. Which of the following is NOT a flammable liquid?
 - a. gasoline
 - b. oil-based paint
 - c. grease
 - d. wood
- ____ 4. What is the most common source of fire in the home?
 - a. overheated electrical appliance
 - b. cigarette lighters
 - c. cooking equipment
 - d. lightning
- ____ 5. Which of the following can be worn when cooking?
 - a. loose blouse
 - b. long-sleeved polo
 - c. long, loose dress
 - d. short-sleeved shirt
- ____ 6. Which of the following situations is a possible cause of fire and fire-related injuries?
 - a. flammable liquids stored in properly labeled, non-glass containers
 - b. not smoking when in bed

- c. a candle left burning when everyone in the house is asleep
 - d. turning off the stove after cooking
- _____ 7. It is a kind of burn that affects only the outer layer of the skin, or the epidermis.
- a. first-degree burn
 - b. second-degree burn
 - c. third-degree burn
 - d. fourth-degree burn
- _____ 8. It is the breathing in of harmful gases, vapors and tiny substances in smoke.
- a. sunburn
 - b. dog bite
 - c. fall
 - d. smoke inhalation
- _____ 9. What should you remember when using a stove?
- a. Always turn off the stove after cooking.
 - b. Allow your pressure cooker to boil dry.
 - c. Let the stove get red hot.
 - d. Leave the stove while cooking.
- _____ 10. Which of the following is the incorrect way of storing flammable liquids?
- a. in properly labeled, tightly closed containers
 - b. near a stove while cooking
 - c. away from electric and glass appliances
 - d. out of reach of children

Well, how was it? Do you think you fared well? Compare your answers with those in the *Answer Key* on pages 37–38.

If all your answers are correct, very good! This shows that you already know much about the topic in this module. You may still study this module to review what you already know. Who knows, you might learn a few more new things as well.

If you got a low score, don't feel bad. This means that this module is for you. It will help you understand important concepts that you can apply in your daily life. If you study this module carefully, you will learn the answers to all the items in the test and a lot more! Are you ready?

You may now go to the next page to begin Lesson 1.

Common Causes of Fire at Home

Fire occurs when heat, fuel and oxygen combine, either by a chemical chain reaction, through nature or human intervention. When fire is left unattended, it may cause serious injuries. You must be aware which areas, appliances or materials in your home are fire hazards or can be causes of fire.

This lesson discusses the common causes of fire that occurs at home. You will learn how to handle appliances and equipment in your home to prevent accidental fire.

After studying this lesson, you should be able to:

- ◆ identify the common causes of fire at home; and
- ◆ explain how materials and products at home cause fire.



Let's Try This

Below is a list of materials that can be sources of fire. Group them together and place them in the appropriate column.

| | | |
|-----------------|------------|--------------|
| gasoline | fuse boxes | electric fan |
| oil-based paint | cloth | rubber |
| machinery | oil | paper |

Ordinary Combustibles

Flammable Liquids

Energized Electrical Equipment

- | | | |
|----------|----------|----------|
| 1. _____ | 1. _____ | 1. _____ |
| 2. _____ | 2. _____ | 2. _____ |
| 3. _____ | 3. _____ | 3. _____ |

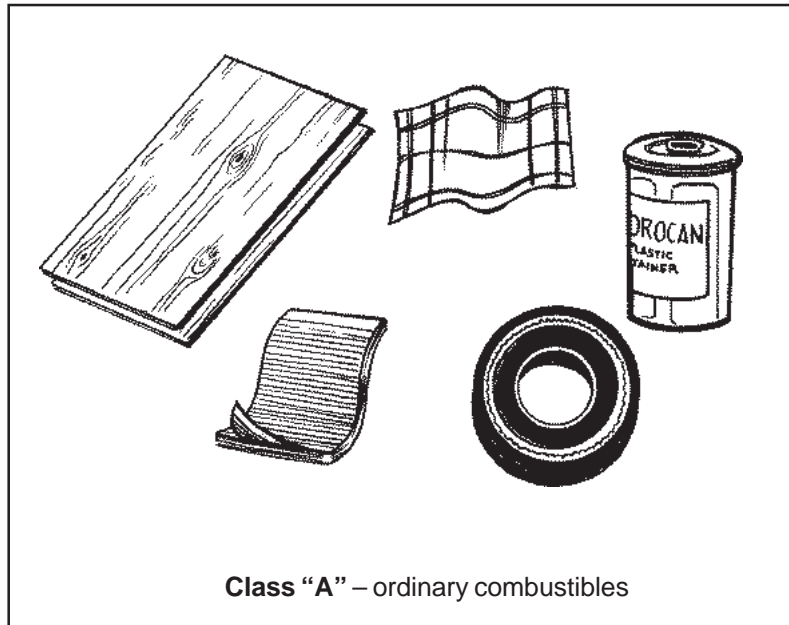
Compare your answers with those in the *Answer Key* on page 38.



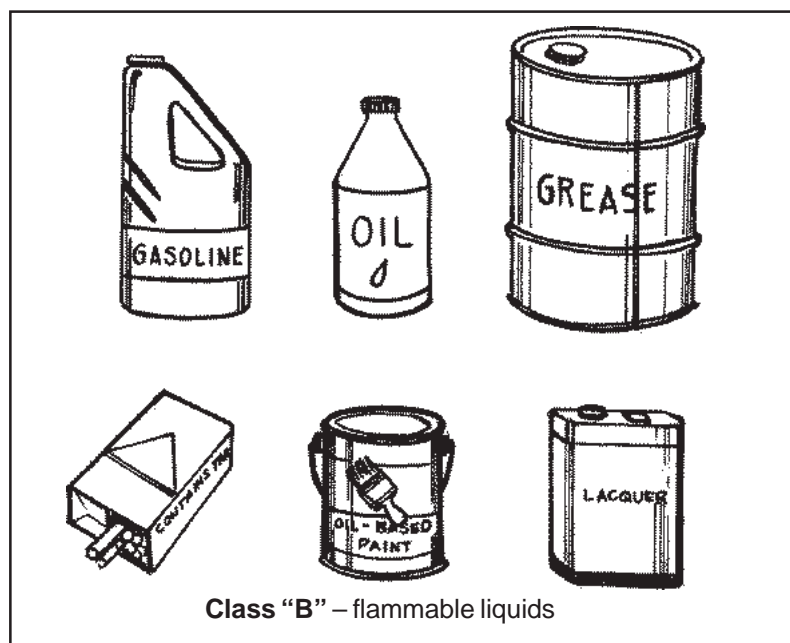
Let's Learn

There are three common types or classes of fire.

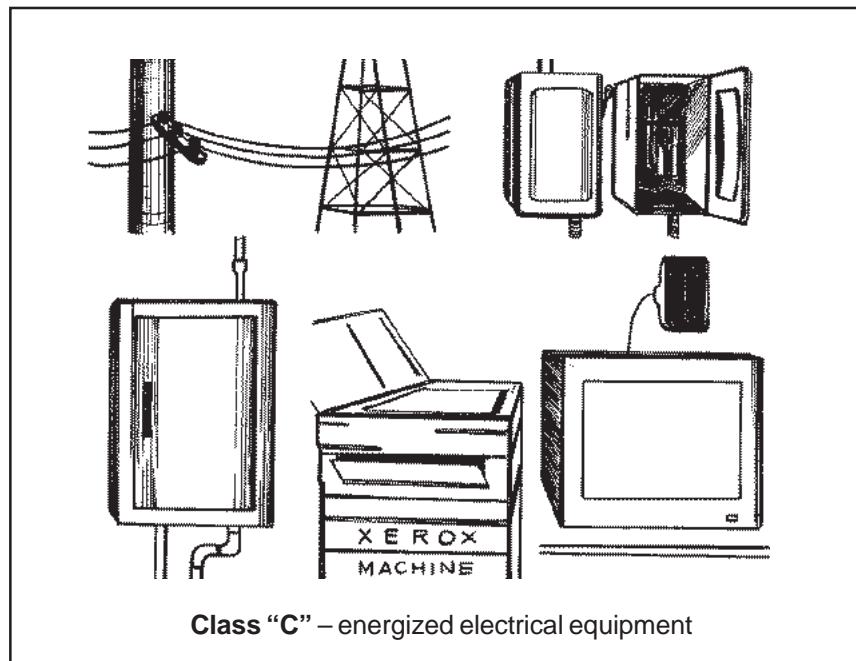
Class “A” fires involve ordinary combustibles. Ordinary combustibles are common materials in the house that can catch fire and burn easily. These include wood, paper, cloth, rubber and many plastics.



Class “B” fires involve flammable liquids, such as gasoline, oil, grease, tar, oil-based paints, lacquer and flammable gases. Flammable liquids are liquids that can burn easily.



Class “C” fires involve energized electrical equipment such as wiring, fuse boxes, circuit breakers, machinery and appliances. The main source of energy of these equipment is electricity.



Knowing the nature of the materials you have in your home makes you aware of the need to handle them properly to prevent fire and fire-related injuries. As you read on, you will learn more about proper handling of materials and equipment in your home to ensure the safety of your family.



Let's Review

Classify the following materials according to the type of fire they can be involved in. Write **A** for Class A fires; **B** for Class “B” fires; and **C** for Class “C” fires. Write your answers in the blanks provided.

- | | |
|--------------------|--------------------------|
| ____ 1. gasoline | ____ 6. grease |
| ____ 2. fuse box | ____ 7. wood |
| ____ 3. paper | ____ 8. oil-based paints |
| ____ 4. cloth | ____ 9. tar |
| ____ 5. appliances | ____ 10. rubber |

Compare your answers with those in the *Answer Key* on page 38.



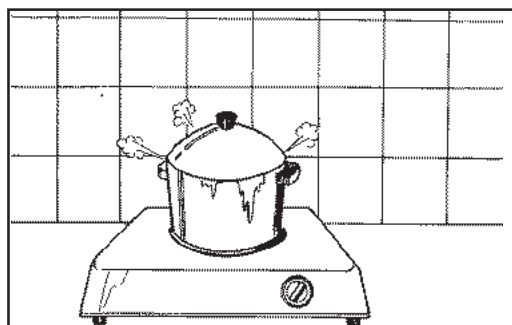
Let's Study and Analyze

Study the picture below. Does it show fire hazards? Write down anything that could possibly cause fire or fire-related accidents in the space below after the picture.



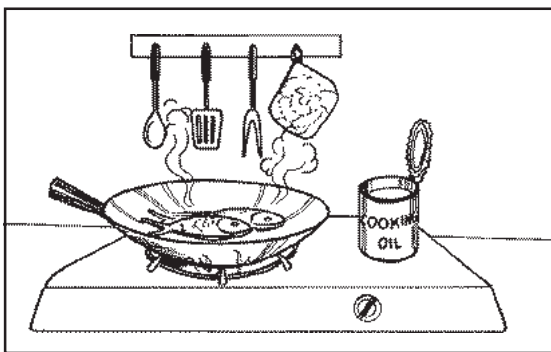
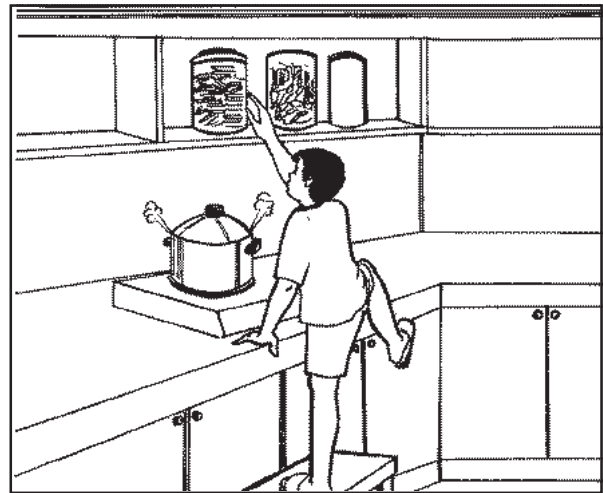
Read on to find out if your ideas are correct.

The most common cause of fire in the home is associated with **cooking equipment**. Sometimes, the stove is left unattended when cooking. This is very dangerous, especially when the burner is turned on a high setting.



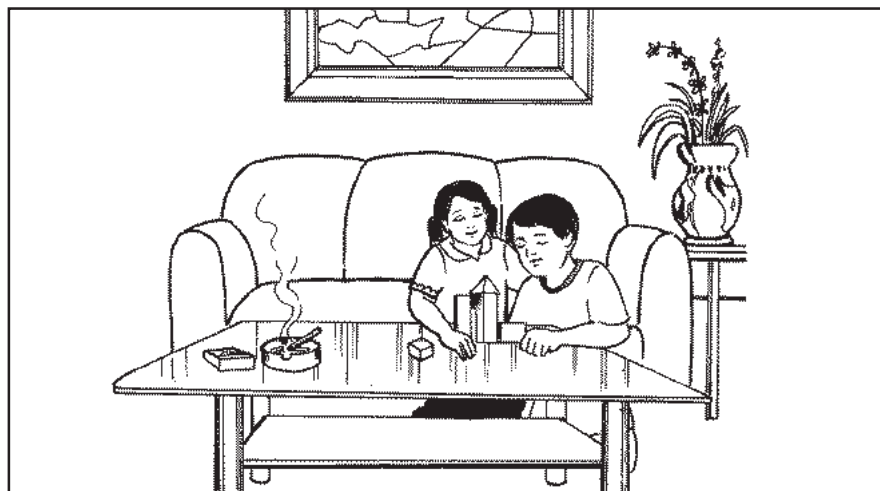
Fire-related accidents can also occur when you're cooking and you're wearing loose or long-sleeved clothes. Your clothes may catch fire or may get caught on pot handles, overturning pots and pans and causing scalds.

Children are also in danger when candy or cookie jars are placed in the storage cabinet above the stove. Children will be tempted to reach for these jars and may meet accidents, especially when the stove is on.



Combustible and flammable items placed near the stove can also be a source of fire accidents. These items easily catch fire, especially when the stove is on a high setting.

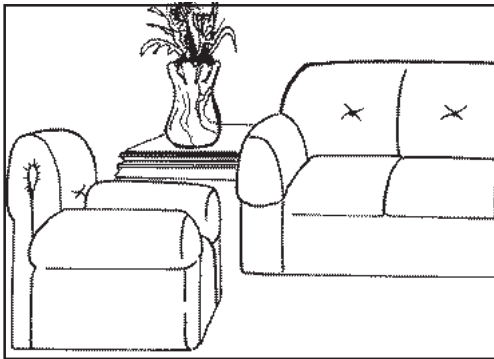
Study the picture below.



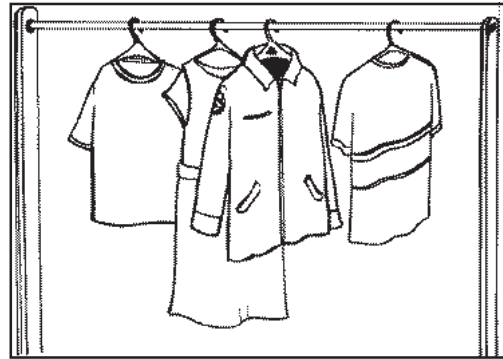
What possible sources of fire or fire-related injuries can you find in the situation shown? Write your answers in the spaces below.

Each year, there are many deaths associated with fires started by cigarette lighters, matches, burning candles, and cigarettes left unattended.

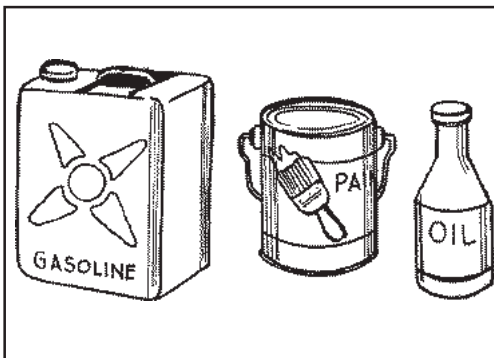
There are many materials or products in your home that can easily burn if ignited. Can you identify these materials? Write your answers in the spaces provided.



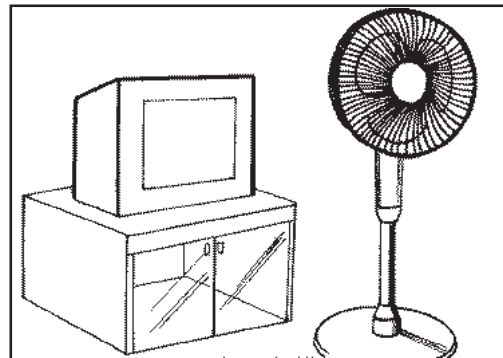
1. _____



2. _____



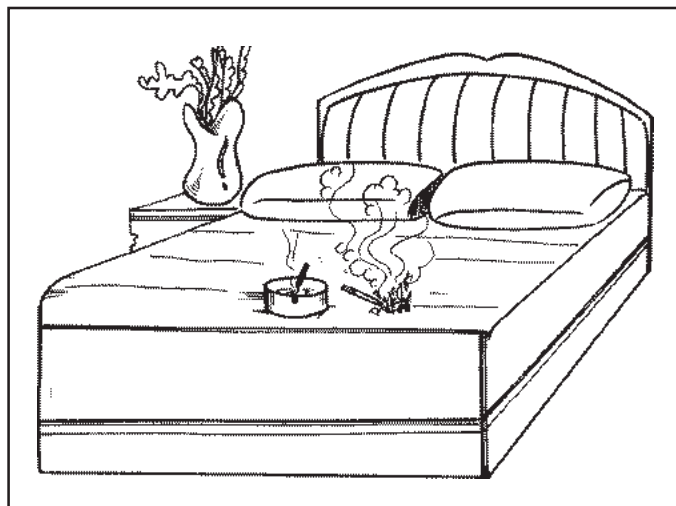
3. _____



4. _____

Materials such as upholstered furniture, clothes, gasoline and other flammable liquids, and home appliances are involved in many injury-causing fires each year.

Certain upholstered furniture, like sofas, beds and mattresses, are easily ignited by lighted cigarettes and when placed near sources of fire, like stoves or kerosene lamps.



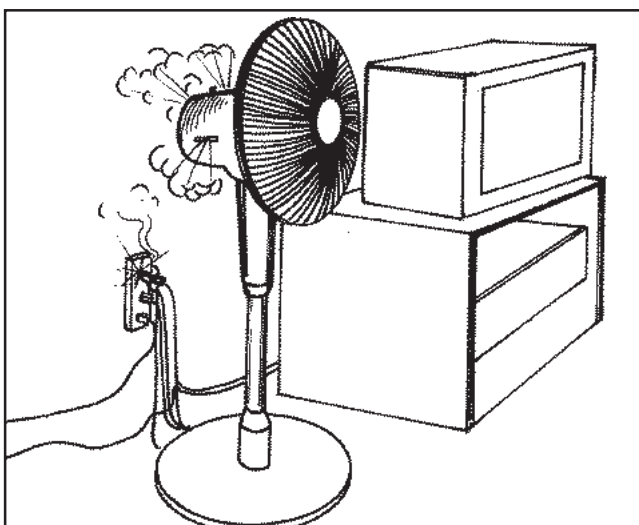
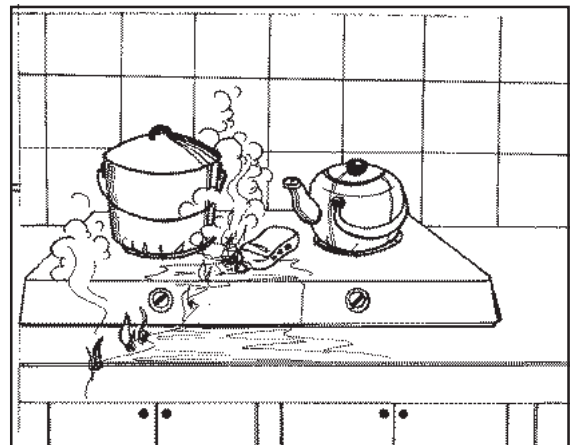


Most fibers used in clothing can burn, some more quickly than others. Fabrics containing cotton, cotton/polyester blends, rayon and acrylic are relatively easy to ignite and burn rapidly.

Small open fires, including matches, cigarette lighters and candles, are the major sources of clothing ignition. These are followed by stoves and open fires. The most commonly worn garments that are associated with clothing ignition injuries are pajamas, nightgowns, robes, shirts/blouses, pants/slacks and dresses.

Another major cause of household fires is flammable liquids. These include gasoline, acetone, benzene, lacquer thinner, alcohol, turpentine, contact cements, paint thinner, kerosene and charcoal lighter fluid. The most dangerous of all is gasoline.

When these materials are placed near electrical or gas appliances, it is highly possible for a fire to start.



Other sources of fire are overheated electrical appliances and electrical short circuits. Octopus connections are potential hazards. You have an octopus connection when you plug in more than three appliances in a single outlet at the same time. A spark may start and a fire may occur.



Let's Review

Study the following situations. Explain why each situation can be a cause of fire.

1. flammable liquids left lying anywhere in the house

2. smoking in bed

3. leaving cigarette butts on furniture

4. leaving the stove unattended when cooking and when the burner is turned to a high setting

5. cigarette lighters and matches left lying where children may reach them

Compare your answers with those in the *Answer Key* on pages 38–39.



Let's See What You Have Learned

- A. Group the following materials according to the type of fire they are involved in. Place them in the proper column.

| | | | |
|-----------|----------|------------|--------|
| plastics | gasoline | appliances | oil |
| machinery | cloth | rubber | wiring |
| grease | tar | fuse box | paper |

Class A

Class B

Class C

- | | | |
|----------|----------|----------|
| 1. _____ | 1. _____ | 1. _____ |
| 2. _____ | 2. _____ | 2. _____ |
| 3. _____ | 3. _____ | 3. _____ |
| 4. _____ | 4. _____ | 4. _____ |

- B. Which of the following situations can cause a fire or fire-related accidents? Place an X-mark (X) in the blank before the number of your choice.

- _____ 1. wearing a long-sleeved shirt while cooking
- _____ 2. keeping lighters and matches out of reach of children
- _____ 3. leaving the stove unattended when cooking
- _____ 4. storage area above the stove filled with flammable and combustible items
- _____ 5. smoking in bed
- _____ 6. flammable liquids, like oil and gasoline, placed near the stove
- _____ 7. wearing clothes that can ignite easily
- _____ 8. cigarettes and ashtrays left on or near upholstered furniture
- _____ 9. candy and cookie jars not kept above the stove
- _____ 10. allowing children to play with cigarette lighters

Compare your answers with those in the *Answer Key* on page 39.

How did you do? If you got all the answers correct, that's very good! That means you learned a lot from this lesson. You can now move on to the next lesson. If you had some mistakes, don't worry. Just review the parts of the lesson you did not understand.



Let's Remember

In this lesson, you learned that:

- ◆ There are three types or classes of fire:
 - **Class “A”** fires involve ordinary combustibles.
 - **Class “B”** fires involve flammable liquids.
 - **Class “C”** fires involve energized electrical equipment.
- ◆ There are many materials and products in the house that may cause fire:
 - cooking equipment;
 - cigarette lighters, candles and matches;
 - upholstered furniture;
 - clothes that are easily ignited and burn quickly;
 - flammable liquids; and
 - electrical appliances.

Fire-Related Injuries at Home

We often believe that one is safe when he/she is at home. We fail to realize that many injuries occur at home. Some of these are fire-related. Children and old people are most often the victims of fires.

This lesson will discuss the different accidents and injuries that are fire-related. You should know how to identify these accidents so that immediate treatment may be given to the victims.

After studying this lesson, you should be able to:

- ◆ identify injuries that are caused by fire; and
- ◆ explain how these injuries should be treated.



Let's Think About This

Answer these questions:

1. Have you ever suffered from a fire-related injury? What happened?

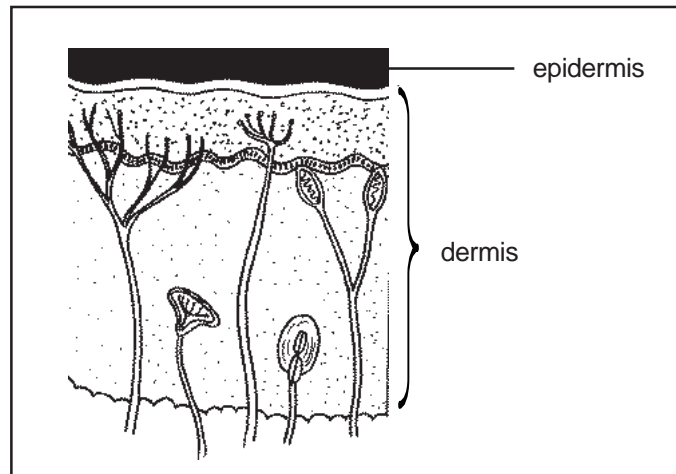
2. How did you treat the injury?

Compare your answers with those in the *Answer Key* on pages 39–40.



Let's Read

Burns



The Human Skin

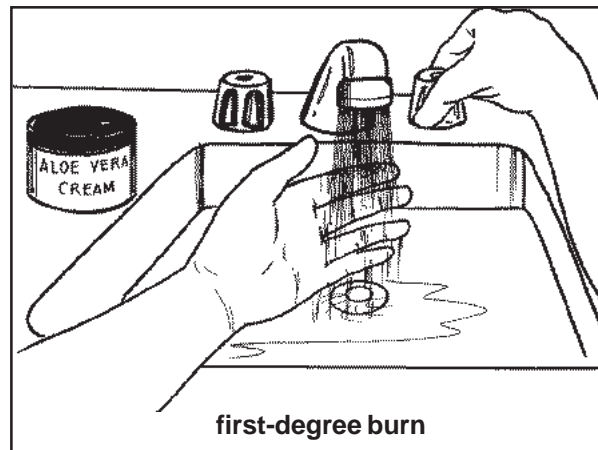
The skin is the largest organ in the body and is very important for our survival. It is made up of two layers, the epidermis (outer part of the skin) and the dermis (inner layer). It controls temperature and the loss of fluids. It also protects the body from infection. Burn injuries can cause severe problems and can be difficult to treat. Burns result from exposure to or contact with fire or heat. Small or minor burns can be treated immediately, without the need to place the victim in the hospital for several days or weeks. However, larger or more serious burns are best treated by a specialist – a doctor who deals mostly with burns.

There are four kinds of burns.

1. **First-degree or mild, partial-thickness burns** involve only the uppermost part of the skin and cause redness and peeling of the skin. Accidentally touching a bowl of hot soup for a few seconds may cause first-degree burns. Burn ointment, skin moisturizers and protection from further injury are all that you need. These burns will heal within a few days without leaving scars and change in skin color.

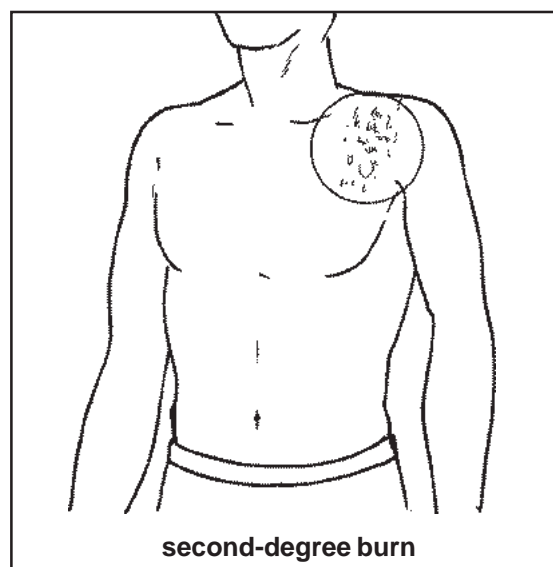


To ease the pain caused by a first-degree burn, you can place the affected area under running water, or cool, wet cloth may be placed directly and with pressure on the skin. Aloe vera creams or Aspirin may help ease the pain more quickly.

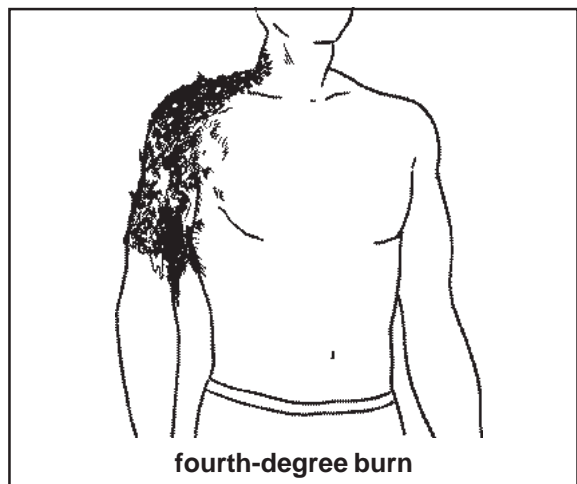
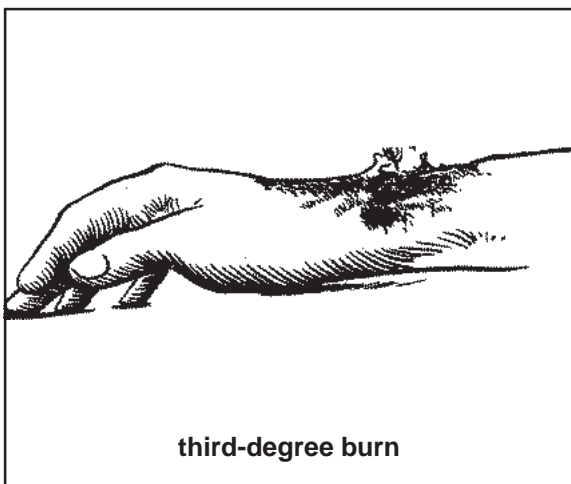


2. When you see blisters forming on the burned area, a ***second-degree or deep partial-thickness burn*** has occurred. This type of burn extends into the dermis of the skin and results in a watery, painful wound. A small second-degree burn can be treated by cleaning the wound, applying ointment and putting light dressings on it. A dressing is a kind of bandage used to protect a wound.

A doctor from the emergency department should be consulted for burns that involve the face, hands, feet, the hips or areas larger than the palm of the hand. Victims of large or serious second-degree burns need to be hospitalized and at times undergo surgery. Surgery is a procedure wherein the damaged area of the body is repaired using medical instruments and equipment. Serious second-degree burns may leave scars and skin discoloration or change in skin color.



3. **Third-degree or full-thickness burns** involve the full thickness of the skin. The skin turns pale or brownish yellow and is leathery. The area should be covered with a freshly ironed towel or clean dressings moistened with soda solution and the victim should be brought immediately to a hospital. A soda solution is a mixture of water and baking soda.
4. **Fourth-degree burns** involve deeper parts of the body, such as tendons, joints or bones. Serious third- and fourth-degree burns need special care in a burn center and surgery. These burns need to be handled by a doctor. They result in scars and, even with careful treatment, may result in permanent disability or deformity. Disability means being unable to perform well physically. Deformity is the change of form or distortion of the affected area.



Let's Try This

Study the following statements. Tell what type of burn each statement describes. Write **first-degree**, **second-degree**, **third-degree** or **fourth-degree** in the blanks.

- _____ 1. It involves the full thickness of the skin and deeper parts of the body, such as tendons, joints or bones.
- _____ 2. It is limited to the outer layer or part of the skin, the epidermis.
- _____ 3. This burn extends into the dermis of the skin and results in a watery, painful wound.
- _____ 4. Though it does not involve the deeper areas of the body, it may result in scars and even permanent disability.
- _____ 5. It can simply be treated with burn ointment, skin moisturizers, and protection from further injury.

- _____ 6. It is a partial-thickness burn that results in blistering.
- _____ 7. The burnt skin is pale, or brownish yellow and leathery with no damage to the deeper or inner parts of the body.
- _____ 8. There may be swelling, but no blistering.
- _____ 9. This type of burn will heal without leaving scars and changes in skin color.
- _____ 10. It affects the outer layer and part of the inner layer of the skin.

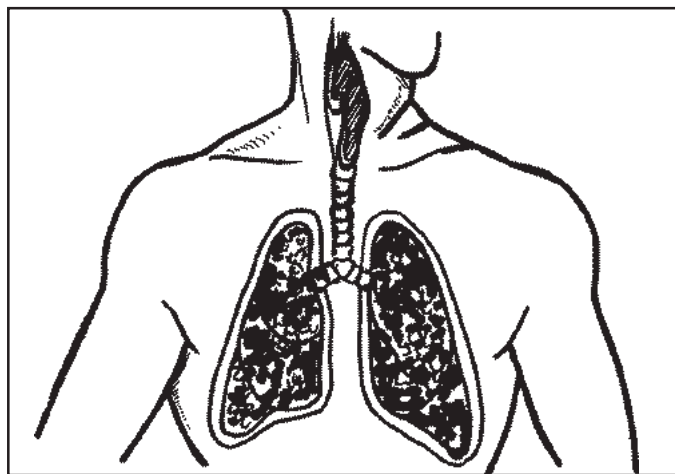
Compare your answers with those in the *Answer Key* on page 40.



Let's Read

Smoke Inhalation

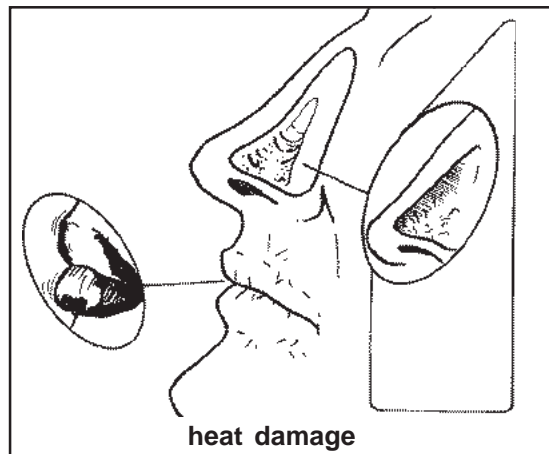
Smoke inhalation is breathing in harmful gases, vapors and tiny substances given off by smoke.



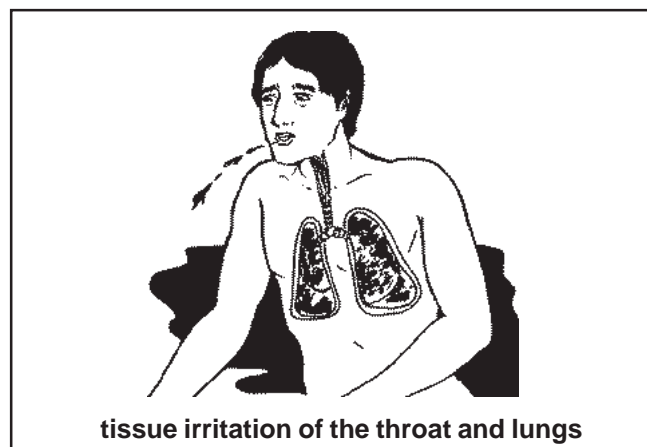
Smoke inhalation is the cause of more than half of all fire-related injuries and deaths. In most cases, fire victims suffer from smoke inhalation before burn injuries occur. Most of those who die in residential fires have inhaled heated air, smoke and other toxic gases. Victims may produce blackish phlegm, have facial/airway burns, and have lungs filled with fluid.

The harmful materials given off by smoke, and harmful gases or vapors harm the airways and lungs in three ways: damage from heat, irritation of tissues that line the airways and lungs, and the shortage of oxygen needed by the body's tissues.

Signs of heat damage are singed or burned hairs in the nose, burns around and inside the nose and mouth, and the inside swelling of the throat.



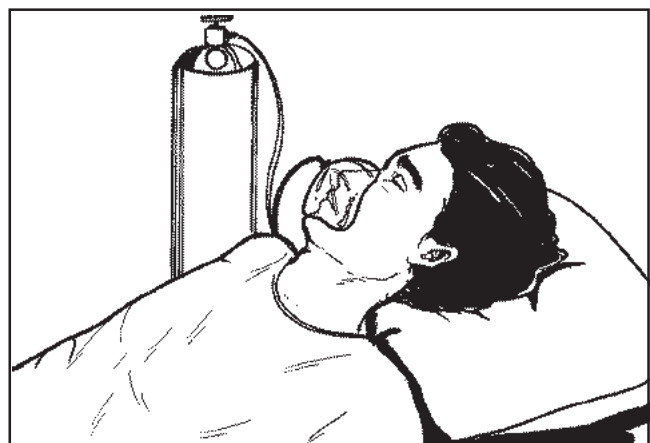
The signs of tissue irritation of the throat and lungs are noisy breathing, coughing, harsh or rough voice, black or gray spit, and fluid in the lungs.

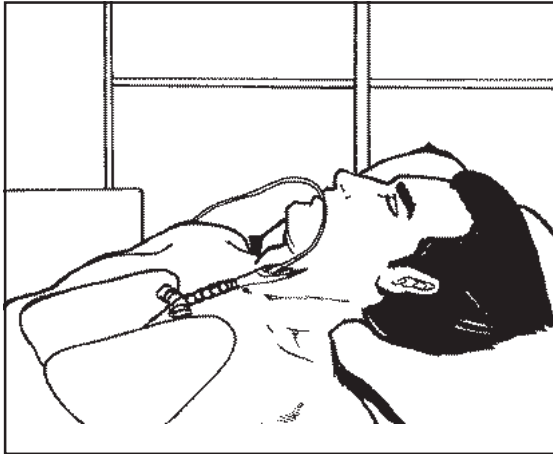


Shortage of oxygen that the body's tissues need is seen from shortness of breath and blue-gray or cherry-red skin color. In some cases, the victim may not be conscious or breathing.

Treatment depends on how serious the damage is. The primary aim of treatment is to keep the airway open and to provide enough oxygen to the victim. Victims of smoke inhalation should be brought to a hospital immediately.

If the victim's airway is open and stable, he or she is usually given oxygen by mask. Oxygen masks are readily available in ambulance cars and in emergency rooms in hospitals.





If the victim's airway tissues are swelling and thus blocking off the airway, a doctor may need to insert a narrow tube through his or her mouth to artificially keep the airway open.

There are other treatments used to treat smoke inhalation. These treatments are given in hospitals under the supervision of a doctor. Thus, it is important that a victim of smoke inhalation be brought to a doctor for immediate medical attention.



Let Review

Match Column A with Column B. Write the letter of the correct answer in the blank provided before the number of each statement.

Column A

- _____ 1. It is the breathing of harmful gases, vapors and tiny substances contained in smoke.
- _____ 2. Its signs are burned hairs in the nose, burns around and inside the nose and mouth, and the inside swelling of the throat.
- _____ 3. This is seen in the shortness of breath and blue-gray or cherry-red skin color.
- _____ 4. This may appear as noisy breathing, coughing, harsh or rough voice, black or gray spit and fluid in the lungs.
- _____ 5. These are the primary aims of the treatment for smoke inhalation.

Column B

- a. tissue irritation of the throat and lungs
- b. shortage of oxygen needed by the body's tissues
- c. smoke inhalation
- d. to keep an open airway and to give sufficient oxygen
- e. heat damage

Compare your answers with those in the *Answer Key* on page 40.



Let's See What You Have Learned

Study the following situations. Identify the injury described in each situation and tell what you should do about it. Write your answers in the blanks provided.

1. You accidentally touched a hot piece of metal for a few seconds. There is only redness and swelling. No blister is forming and there are no other damages to your skin.

2. Your mother burned her arm while cooking. A small blister is forming and the burn is painful.

3. Your friend was trapped when his house got burned. The firemen were able to save him but his injuries were serious. His skin had become brown and leathery.

4. A young man accidentally inhaled gas fumes while fixing a gas stove. There are burns around and inside his nose and mouth. However, he is still conscious and his airway is open.

Compare your answers with those in the *Answer Key* on pages 40–41.

How did you do? If you got all the correct answers, that's very good! That means you learned a lot from this lesson. You can now move on to the next lesson. If you had some mistakes, don't worry. Just review the parts of the lesson you did not understand.



Let's Remember

In this lesson, you have learned that fire can cause different kinds of injuries.

- ◆ **Burns** are the major injuries caused by or related to fire.
 - **First-degree** or **mild, partial-thickness** burns affect only the outer layer of the skin, or the epidermis. There is redness and swelling.
 - **Second-degree** or **deep partial-thickness** burns affect both the outer and deeper layers of the skin.
 - **Third-degree** or **full-thickness** burns are usually serious and affect all the layers of the skin. The skin turns brownish, pale or brownish yellow, and leathery.
 - **Fourth-degree** burns are much more serious than third-degree burns. They affect the deeper, internal parts of the body, such as tendons, joints or bones.
- ◆ **Smoke inhalation** is the breathing in of harmful gases, vapors and tiny substances given off by smoke. There are three ways in which the airways and lungs get injured when harmful materials are inhaled.
 - **Heat damage** is marked by burned nose hairs, burns around and inside the nose and mouth, and inside swelling of the throat.
 - The signs of **tissue irritation** of the throat and lungs are noisy breathing, coughing, hoarse or rough voice, black or gray spit, and fluid in the lungs.
 - **Shortage of oxygen supply to the body's tissues** is marked by shortness of breath and blue-gray or cherry-red skin color.
- ◆ Minor injuries, like first-degree and mild second-degree burns, may be treated at home. However, severe injuries should immediately be given proper medical attention.

Fire Prevention and Safety Tips

In the last two lessons, you learned about the causes of fire at home. You also learned about the injuries related to fire. It is important to know that fire is no joke. You can get very badly hurt or even die in a fire. You can even lose the people you love in a fire.

Now that you know the causes of fire at home and the injuries related to fire, how can you prevent fire-related injuries from occurring? What can you do to help prevent the occurrence of fire in your home? That's what this lesson is all about.

This lesson will discuss tips and measures on how to prevent fire and fire-related injuries. It is very important that you practice caution when handling fire. Keep in mind that safety should be a primary concern in your home. As they say, "It is better to be safe than sorry."

After studying this lesson, you should be able to:

- ◆ describe fire prevention measures and safety tips; and
- ◆ demonstrate proper handling of fire and fire safety.



Let's Try This

Study the following statement. Which of these do you practice or observe? For each statement, put a check mark (✓) under the **Yes** column if you observe or practice it. If you don't, put a check mark under the **No** column.

Home Fire Safety Checklist

| <i>Statement</i> |
|--|
| 1. The storage area above the stove is free of items that easily catch fire and burn. |
| 2. Short or tight-fitting sleeves and tight-fitting clothing are worn while cooking. |
| 3. Items that could attract children, like cookies and candies, are not kept above the stove and are kept out of the area. |
| 4. Someone always minds the stove when cooking, especially when the burner is turned to a high flame. |
| 5. Cigarette lighters, matches and candles are kept out of reach of children. |

| <i>Statement</i> |
|--|
| 6. Cigarette lighters and matches are never used entertain a child. |
| 7. Candles are never left burning, especially whe everyone in the house is asleep. |
| 8. Furniture is generally chosen for safety reason much as possible, furniture that do not catch f quickly nor burn easily are used. |
| 9. I check thoroughly for ashes or cigarettes that have fallen behind and between cushions and furniture. |
| 10. “No smoking in bed” is a rule that is practiced home. |
| 11. Candles, ashtrays and smoking materials are p away from bedding. |
| 12. When buying clothes, I chose those that don’t fire easily and don’t quickly burn. |
| 13. Flammable liquids are stored in properly label tightly closed non-glass containers. |
| 14. These products are stored away from smoking |

* Adapted from “Your Home Fire Safety Checklist,” Consumer Product Safety Commission CPSC Document #556, <<http://www.cpsc.gov/cpscpub/pubs/556.htm>>

Did you finish answering the checklist? Were you able to answer ‘yes’ to all the statements? If yes, very good! That means you practice fire safety and that fire and fire-related injuries may be far from happening in your home. If you answered ‘no’ to some items, you should continue reading and find out the importance of fire safety.

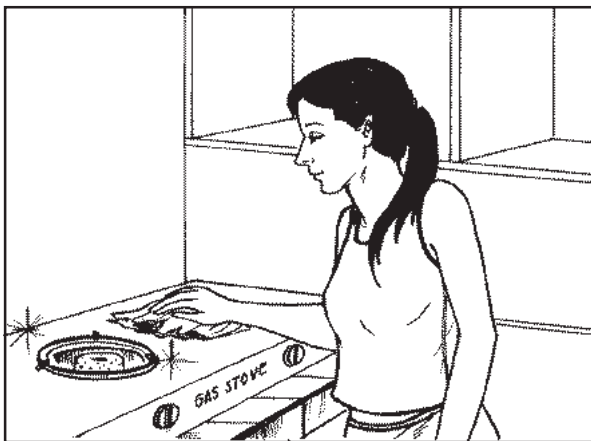
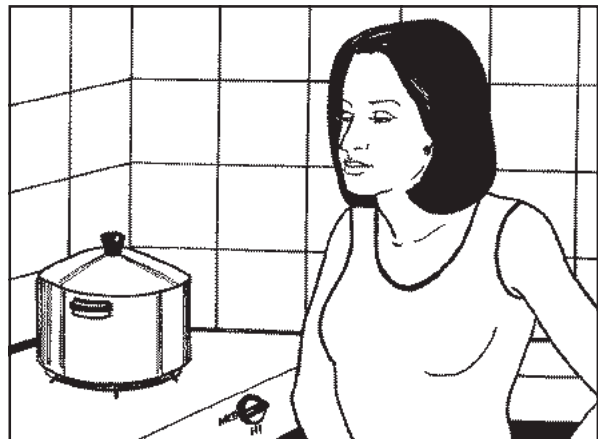


Let's Read

You have learned in Lesson 1 that cooking equipment is the leading cause of fires in the home. Below are some tips on how to handle cooking equipment to assure the safety of your family members and your home.

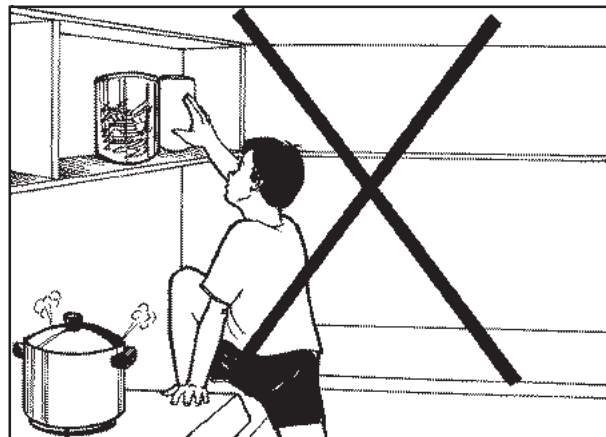
Don't leave the stove while cooking. Always turn it off after cooking and never let the stove get red hot. If you are using a pressure cooker, do not let it boil dry.

Wear short or tight-fitting sleeves, and snug or tight-fitting clothes when cooking.

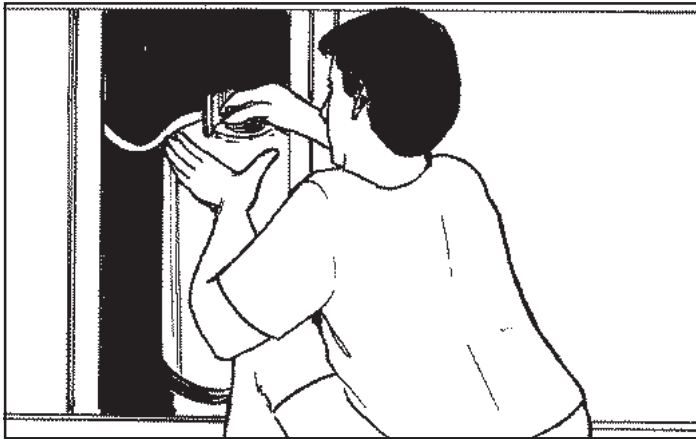
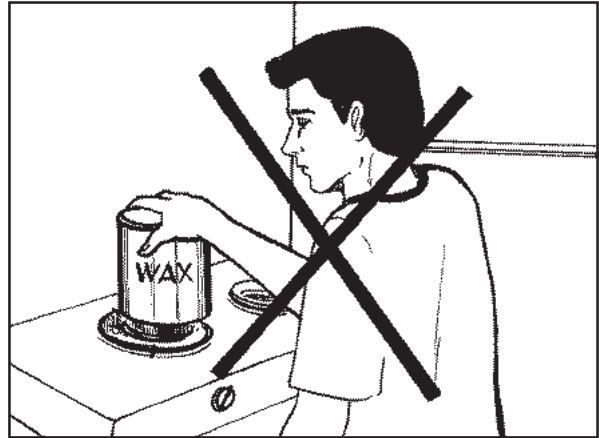


Keep your heat-producing appliances and equipment clean. Old food particles and greasy build-up can catch fire.

Do not place candy or cookies over the top of stoves. This will prevent the kids from climbing on cooking equipment, thus helping prevent the possibility of their clothes catching fire.

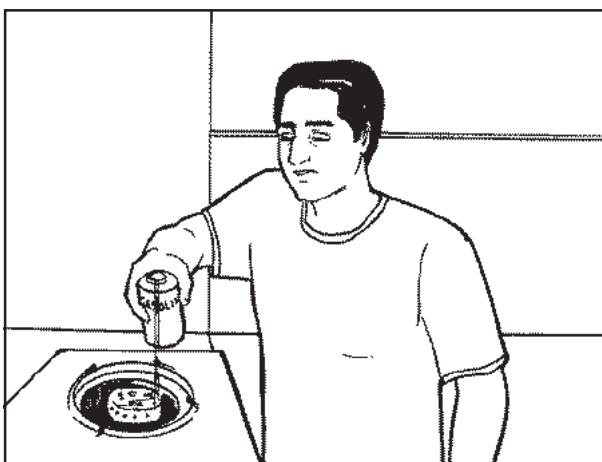
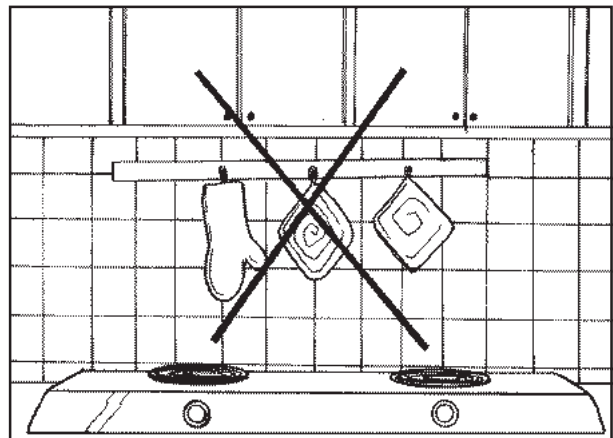


Don't keep or store any flammable substance in your kitchen. Don't heat wax, paints and other polishing substances over open fire.



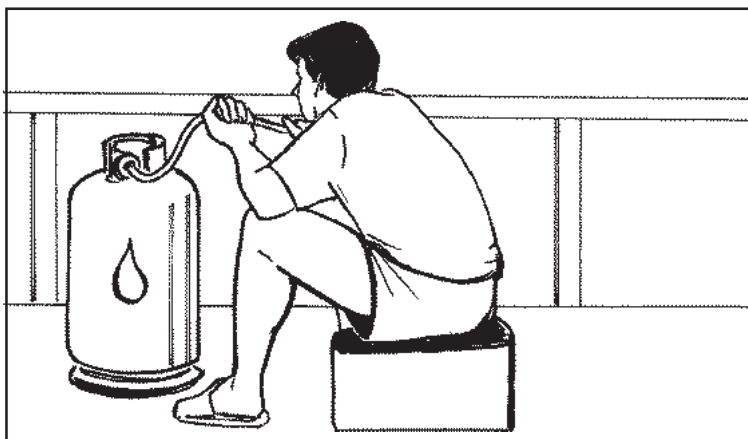
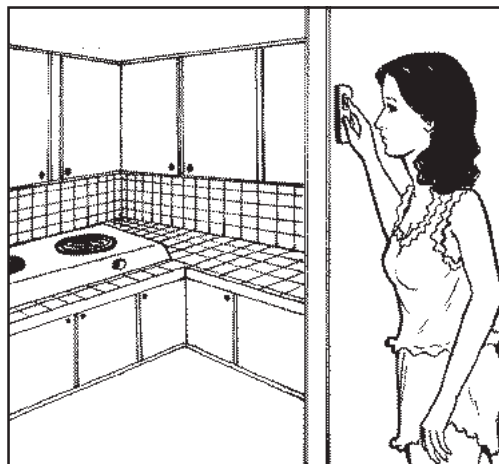
Make sure that the valves are closed when you are not using the stove or the gas range.

Keep the stove at least a foot away from any surrounding combustible walls or sidings. A pot holder near a hot burner is a fire hazard.



Don't pour gasoline or any flammable liquid to start fire in the stove. Use a piece of cloth or paper soaked in the gasoline for this purpose.

Always check your kitchen before going to sleep. Remember, most fires in the home occur at night.



When a leak is detected in your gas range or stove, have it repaired or replaced immediately.



Let's Review

Which of the following are safety tips in handling cooking equipment and appliances? Put a check mark (✓) in the blank before the number of these statements.

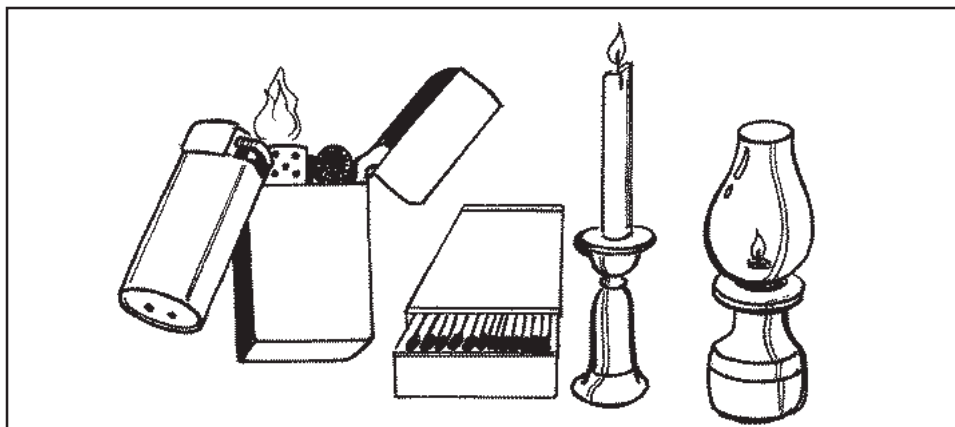
- _____ 1. Leave the stove while cooking.
- _____ 2. Keep heat-producing appliances clean.
- _____ 3. Always check your kitchen before going to sleep.
- _____ 4. Heat wax and paints over open fire.
- _____ 5. Make sure that the valves are closed when you are not using the stove.
- _____ 6. Don't keep or store any flammable substance in your kitchen.
- _____ 7. Always turn off the stove after cooking.
- _____ 8. Never let the stove get red hot.
- _____ 9. Allow your pressure cooker to boil dry.
- _____ 10. Pour gasoline to start fire in the stove.

Compare your answers with those in the *Answer Key* on page 41.



Let's Think About This

Study the picture below. How can you make sure that fire and fire-related injuries will not result from the improper handling of the items shown? Write your answers in the spaces provided below the picture.



Read on to find out if your ideas are correct.



Let's Learn

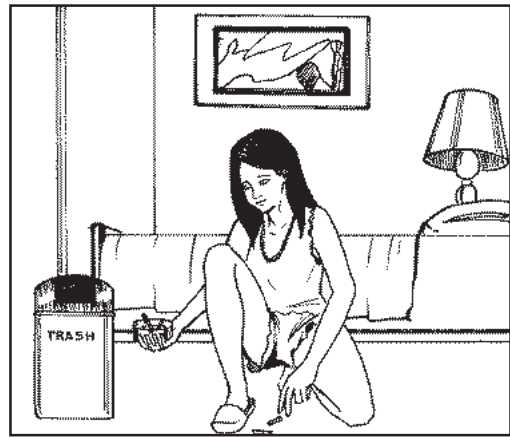
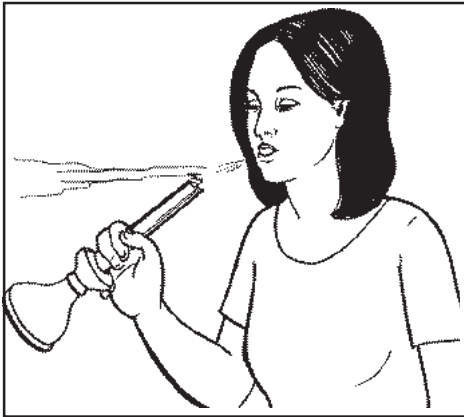
Each year, many deaths result from fires started by cigarette lighters, matches and candles. Such fires are mostly caused by children playing with lighters and matches. Most of the victims are under five years old.

Here are some tips on how to prevent fire and fire-related accidents as a result of improper handling of cigarette lighters, matches and candles.

- ◆ Keep lighters, matches and candles out of sight and out of reach of children. Children as young as two years old can already light these materials.
- ◆ Never encourage or allow a child to play with a lighter or a match, or to think of it as a toy. Never entertain children using these materials. If they get curious, they may try to look for a lighter and light it.



- ◆ Always check to see that cigarettes are put out before cleaning ashtrays. Stubs that are still burning may set trash on fire.

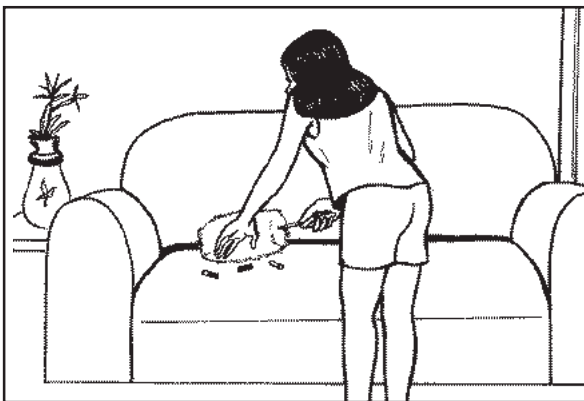


- ◆ Never leave a candle burning when everyone in your household is asleep. Also make sure that gas lamps are put out after they have been used.

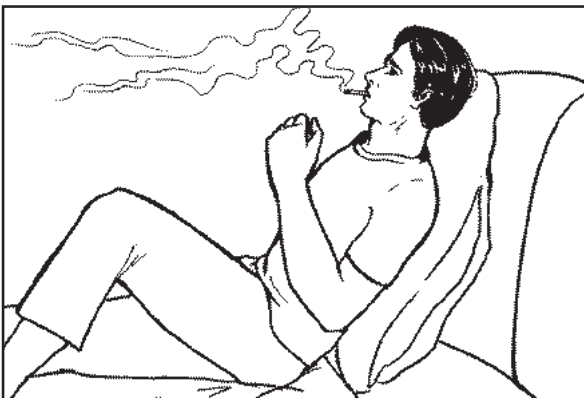


Let's Study and Analyze

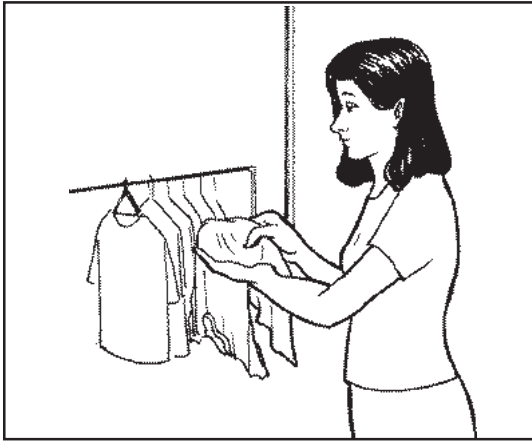
Study the pictures below. Answer the question given after each picture. Write your answer in the spaces provided.



1. Why should you check your furniture for improperly discarded smoking materials?



2. What will you tell a person who always smokes in bed?



3. What kinds of clothes should you buy if you want to practice fire safety?



4. How should flammable liquids be stored?

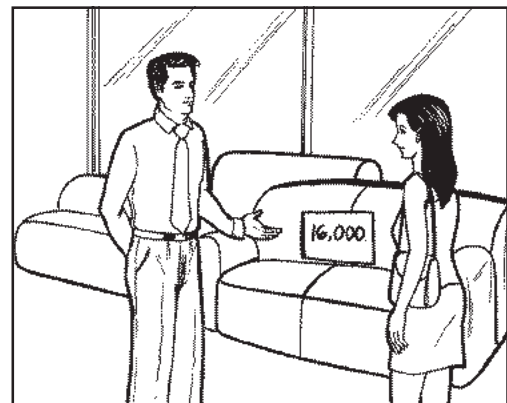
Compare your answers with those in the *Answer Key* on pages 41–42.



Let's Learn

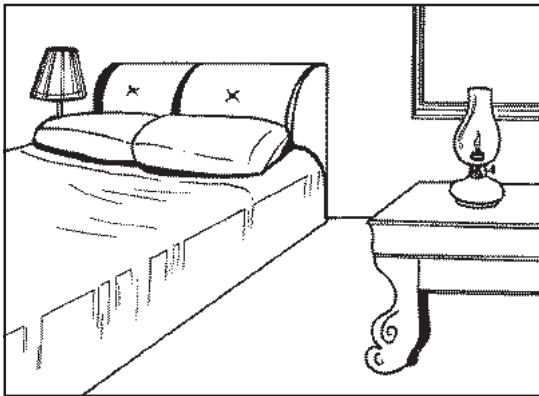
Aside from cooking equipment, smoking materials and candles, there are many other materials in your home that can easily be set on fire and that can quickly burn. Knowing how to handle these materials properly will prevent fire and fire-related accidents and injuries in your home. Here are some very important tips and safety measures for you.

- ◆ When buying upholstered furniture, choose those that don't quickly burn and don't easily ignite. You may ask the salesperson about furniture made of materials that resist ignition.



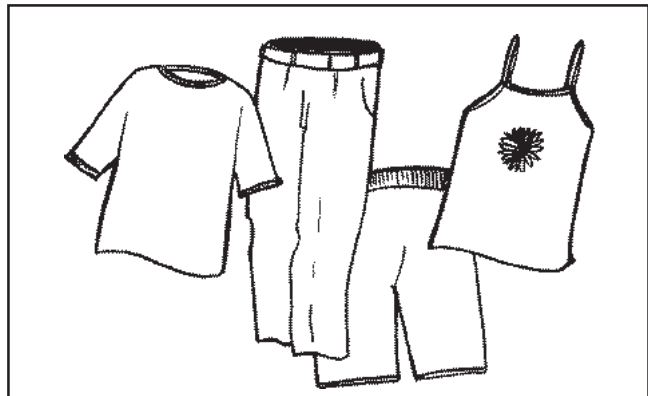
- ◆ Always check the furniture where smokers have been sitting. They may have left ashes or cigarettes that have not been put out completely. These may have fallen behind and between cushions and under furniture.

- ◆ Do not smoke in bed. Smoking in bed is a major cause of accidental fire injuries and deaths in homes.

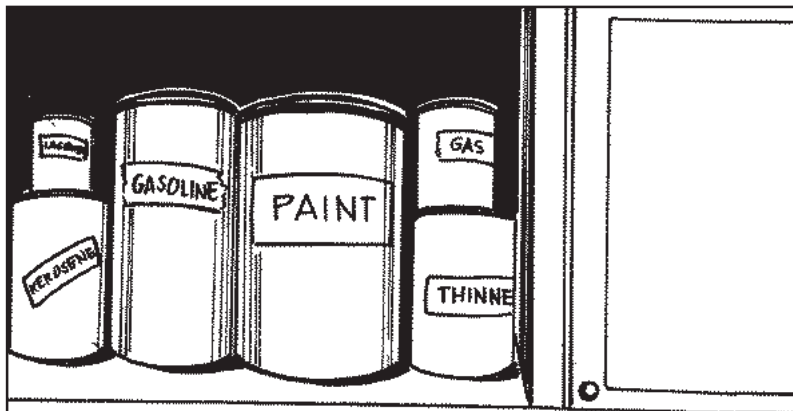


- ◆ Place heaters or other sources of fire (like candles and gas lamps) at least three feet from the bed to prevent the bed from catching fire. Put out any sources of fire before you go to sleep.

- ◆ When buying clothes, consider fabrics or cloth such as 100% polyester, nylon, wool and silk. These don't ignite easily and they tend to self-extinguish.



- ◆ Consider buying garments that can be removed without having to pull them over the head. Clothes that are easy to remove can help prevent serious burns. If clothing can be quickly removed when it catches fire, injury will be far less serious or it can be completely avoided.

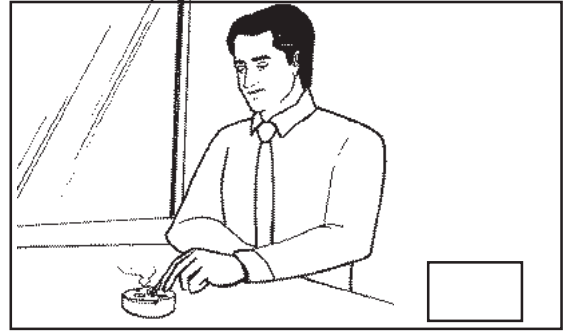
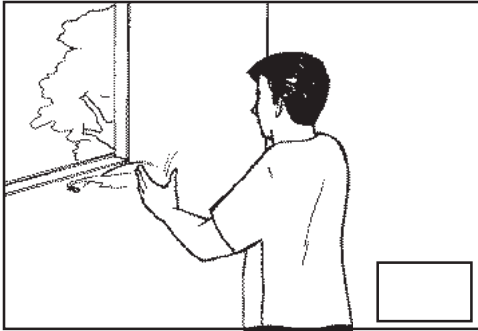


- ◆ Store flammable liquids in properly labeled, tightly closed containers that are not made of glass. They should be placed away from electric and gas appliances and other sources of fire. They should also be kept out of reach of children.
- ◆ You should take extra care in storing and using flammable liquids, such as gasoline, paint thinners, etc. They produce vapors that cannot be seen and are explosive. They can be ignited even by a small spark at a great distance. It is better that they are kept outside the house.

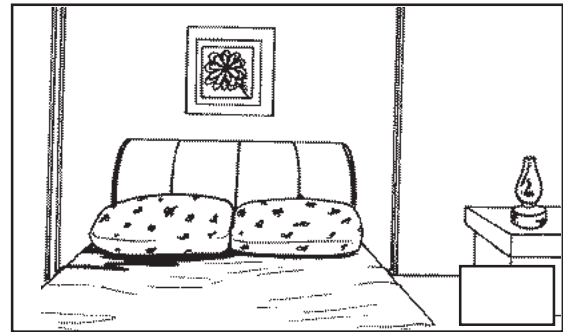
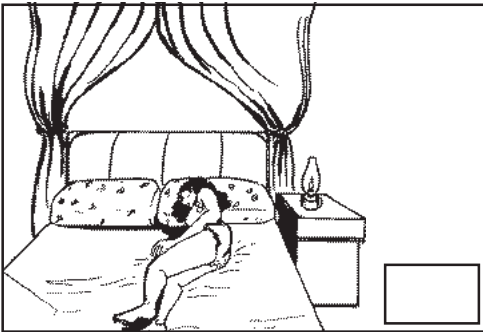


Let's Try This

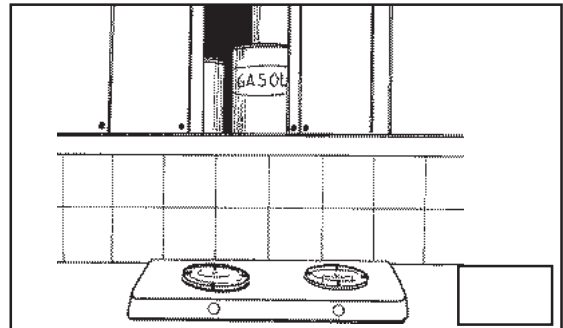
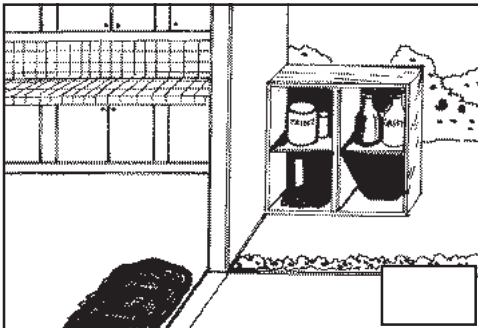
Study each pair of pictures. Put a check mark (✓) inside the box at the lower right corner of the picture that shows fire safety. Explain your answer. Write your explanation in the space provided below each set of pictures.



1. _____



2. _____



3. _____

Compare your answers with those in the *Answer Key* on page 42.



Let's See What You Have Learned

Tell what you will do in the following situations. Write your answers in the spaces provided.

1. You have children in the house. They love to run to the kitchen and climb on top of shelves and appliances to look for candies. You just bought two jars of sweets. Where will you store them? Why?

2. A friend of yours visited you. When he smokes, he usually throws his cigarette butts just anywhere and leaves his lighter lying around. You have children in the house. What should you do?

3. You just moved into a new house. Your family members plan to buy new furniture. What should you consider when you visit a furniture shop?

4. You had to light some candles because of the brownout. Everybody in the house is about to go to sleep. What should you not forget to do?

5. It's summer and you want to buy your nieces and nephews some clothes. What should you remember when buying clothes?

6. You are repainting your house. How should you store your paints and paint thinners?

Compare your answers with those in *Answer Key* on page 43.

How did you do? If you got all the correct answers, that's very good. It means you understood this lesson very well.

If you made some mistakes, don't worry. Just review the parts of the lesson that you did not understand.



Let's Remember

To prevent fire and fire-related injuries, you must follow precautionary measures and safety tips in handling fire.

- ◆ Cooking equipment:
 - There should be no flammable or combustible items near the stove.
 - Wear short or tight fitting sleeves and clothes when cooking.
 - Items that could attract children should be stored away from the stove.
 - Never leave the stove unattended when cooking.
- ◆ Cigarette lighters, matches and candles:
 - Lighters, matches and candles should be kept out of children's reach.
 - Never entertain a child using cigarette lighters.
- ◆ Materials and products that burn:
 - Choose furniture made of material that does not easily ignite.
 - Remove ash and butts that may have fallen behind and between pieces of furniture.
 - Never smoke in bed.
 - Smoking materials and other sources of fire should be placed away from the bed.
 - Buy clothes that don't ignite easily or are resistant to flame.
 - Store flammable liquids in properly labeled, tightly closed non-glass containers and out of children's reach.
 - Flammable liquids should be stored away from electrical and gas appliances and other sources of fire.



What Have You Learned?

Study the story below. Then, answer the questions that follow.



Your neighbor's house was destroyed in a fire. The firemen said that the cause of the fire was the explosion of a bottle of gasoline, which they learned was placed near the kitchen stove. When you saw your neighbor and his family, you noticed that they suffered from some injuries. Your neighbor, who was a fifty-year-old laborer, was brought out in a stretcher. His two arms were severely burned. The skin was brownish and leathery. His wife suffered from watery, painful wounds on her arms and legs, but her skin was not severely damaged. Their only child was coughing severely and had burns inside his nose and mouth. The inside of his throat was swelling. The firemen said that the boy and his mother were lucky because they were able to get out of the house quickly. Your neighbor was unfortunate because he got trapped in the kitchen, which is why he was the one most severely injured.

1. What class of fire happened in the story? Why do you say so? What do you think happened?

2. What kind of injury did your neighbor suffer from? What should be done with his injury? Why?

3. What kind of injury did his wife suffer from? How can her injury be treated?

4. What injury did the boy suffer from? What should be done to treat him?

5. How could the fire have been prevented? Explain your answer.

Well, how did you do? Compare your answers with those in the *Answer Key* on pages 43–44.

If the number of correct answers you got is:

- 5 Very good! You have learned a lot from this module. You may now proceed to the next module.
- 3 – 4 Good! Just review the items that you answered incorrectly.
- 0 – 2 You have to review the whole module again.



Answer Key

A. Let's See What You Already Know (pages 2–3)

1. The correct answer is **(b)**. Fire occurs **when heat, fuel and oxygen combine**. These materials or elements react with one another, thus producing combustion or burning.
2. The correct answer is **(a)**. **Class “A”** fires involve **ordinary combustibles**, like cloth, rubber and paper. Ordinary combustibles are materials that can easily catch fire (or ignite) and burn. Class “B” fires involve flammable liquids, like gasoline and oil. Class “C” fires involve energized electrical equipment, like fuse boxes and home appliances. There are no Class “D” type fires that involve manually-operated equipment.
3. The correct answer is **(d)**. **Wood** is not a flammable liquid. Although wood can easily be set on fire and burn (flammable), it is not a liquid.
4. The correct answer is **(c)**. It has been found out that most fires and fire-related injuries are associated with cooking equipment.
5. The correct answer is **(d)**. When cooking, one should wear clothing that is **short-sleeved**, tight or fitting. This is to prevent the clothing from getting caught on the handles of pots or pans and overturning them and from touching the stove fire when bending over while cooking.
6. The correct answer is **(c)**. **A candle left burning when everyone in the house is asleep** is a possible cause of fire and fire-related injuries. Any material near the candle may catch fire. The other choices are good fire safety tips. They prevent the start and spread of fire in your home.
7. The correct answer is **(a)**. A **first-degree burn** is a burn that affects only the outer layer of the skin, or the epidermis. A **second-degree burn** affects the outer and some of the inner layers of the skin. A **third-degree burn** involves the full thickness of the skin. A **fourth-degree burn** affects the full thickness of the skin and inner parts of the body like tendons, joints or bones.
8. The correct answer is **(d)**. **Smoke inhalation** is the breathing in of harmful gases, vapors and tiny substances given off by smoke.
9. The correct answer is **(a)**. You should remember to **always turn off the stove after cooking**. Leaving the stove switched on after cooking may cause fire. Allowing your pressure cooker to boil dry, letting the stove get red hot, and leaving the stove while cooking may also cause fire.

10. The correct answer is **(b)**. Flammable liquids should not be stored **near a stove while cooking**. Because they can easily be ignited, they may cause fire. When storing flammable liquids, they should be kept in properly labeled, tightly closed containers, away from electric and gas appliances and out of reach of children.

B. Lesson 1

Let's Try This (page 4)

Ordinary Combustibles

1. cloth
2. rubber
3. paper

Flammable Liquids

1. gasoline
2. oil-based paint
3. oil

Energized Electrical Equipment

1. machinery
2. fuse boxes
3. electric fan

Let's Review (page 6)

- B** 1. Gasoline is a flammable liquid.
- C** 2. A fuse box is an example of energized electrical equipment.
- A** 3. Paper is an ordinary combustible.
- A** 4. Cloth is an ordinary combustible.
- C** 5. Appliances are examples of energized electrical equipment.
- B** 6. Grease is a flammable liquid.
- A** 7. Wood is an ordinary combustible.
- B** 8. Oil-based paints are flammable liquids.
- B** 9. Tar is a flammable liquid.
- A** 10. Rubber is an ordinary combustible.

Let's Review (page 11)

1. When flammable liquids are left lying anywhere in the house, they may accidentally come in contact with sources of fire, like matches, cigarettes and gas stoves.
2. Smoking in bed may set fire on the bed, especially when you forget to put out the cigarette completely.

- Let's See What You Have Learned (page 12)*

C. Lesson 2

These are sample answers. Your answers may be different. Show your answers to your Instructional Manager or Facilitator for comments.

- 39

for something on the shelf above the pot and my arm accidentally touched the side of the pot. It was so hot that I burned my skin. Blisters formed on my arm and they were very painful.

2. I asked help from my mother. She cleaned the wound, applied a burn ointment and put a dressing on it. Then, we went to a skin doctor for proper medical treatment. After a few days, the blisters disappeared and my skin went back to normal.

Let's Try This (pages 17–18)

1. fourth-degree
2. first-degree
3. second-degree
4. third-degree
5. first-degree
6. second-degree
7. third-degree
8. first-degree
9. first-degree
10. second-degree

Let's Review (page 20)

1. **(c) Smoke inhalation** is the breathing of harmful gases, vapors and tiny substances contained in smoke.
2. **(e) Heat damage** is marked by burned nasal hairs, burns around and inside the nose and mouth, and the inside swelling of the throat.
3. **(b) Shortage of oxygen needed by the body's tissues** is seen in the shortness of breath and blue-gray or cherry-red skin color.
4. **(a) Tissue irritation of the throat and lungs** may appear as noisy breathing, coughing, harsh or rough voice, black or gray spit, and fluid in the lungs.
5. **(d)** The primary aim of the treatment for smoke inhalation is **to keep an open airway and to give sufficient oxygen** to the victim.

Let's See What You Have Learned (page 21)

1. The injury is a **first-degree burn**. To ease the pain, I should place the burned area under rapidly flowing or running water. Then, I can press a cool, wet cloth on it. I can apply an aloe vera cream to help ease the pain more quickly.

2. The injury is a **second-degree burn**. The burn should be properly cleaned with clean tap water and soap. Then, an ointment should be applied on the area and a light dressing or bandage should be used to cover it.
3. The injury is **third-degree burn**. The burned area should be covered with a freshly ironed towel or clean dressing moistened with soda solution. Then, I will immediately bring my friend to a hospital for proper medical treatment.
4. The injury is **smoke inhalation**. The victim should be given plenty of room to breathe. I will immediately call for an ambulance so he can be given an oxygen mask and be brought to a hospital.

D. Lesson 3

Let's Review (page 27)

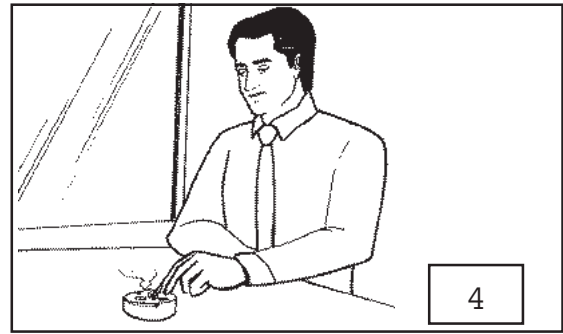
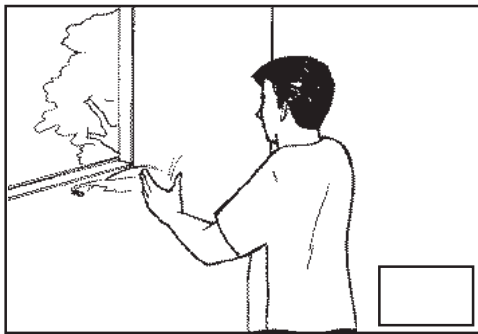
- _____ 1. Leave the stove while cooking.
- 4 2. Keep heat-producing appliances clean.
- 4 3. Always check your kitchen before going to sleep.
- _____ 4. Heat wax and paints over open fire.
- 4 5. Make sure that the valves are closed when you are not using the stove.
- 4 6. Don't keep or store any flammable substance in your kitchen.
- 4 7. Always turn off the stove after cooking.
- 4 8. Never let the stove get red hot.
- _____ 9. Allow your pressure cooker to boil dry.
- _____ 10. Pour gasoline to start fire in the stove.

Let's Study and Analyze (pages 29–30)

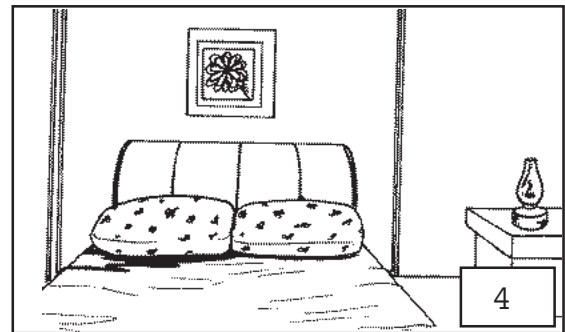
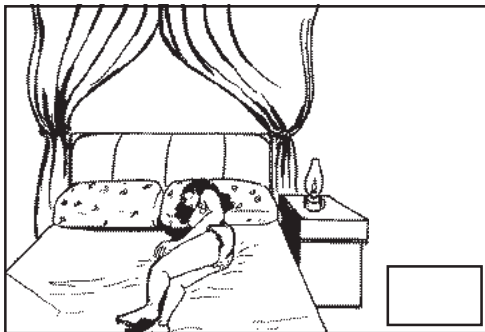
1. I should check my furniture for cigarettes or other smoking materials that have not been discarded properly to make sure that no ashes and cigarettes have been left that may accidentally be ignited when a fire source is near. I need to especially look for cigarettes that have not been completely put out. These may set the furniture and the house on fire.
2. I will tell him or her that it is dangerous to smoke in bed. He may accidentally set the bed on fire, especially if he forgets to completely put out his cigarettes.

3. I will buy clothes that do not ignite easily or don't easily get burned and which are easy to remove in case the garment catches fire.
4. Flammable liquids should be stored in properly labeled, tightly closed, non-glass containers. They should be placed away from gas or electrical appliances and kept out of children's reach.

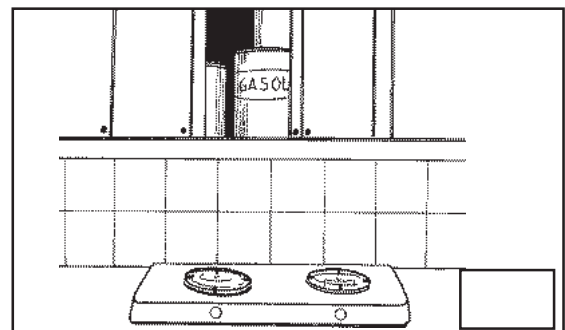
Let's Try This (page 32)



1. The man in the second picture is practicing fire safety because he disposes of his used cigarette butt properly. He also makes sure that his cigarettes are completely put out when he is finished with them. The cigarettes will then not be a cause of fire.



2. Placing the gas lamp far from the bed is a form of practicing fire safety. This makes sure that the bed will not catch fire.



3. Storing flammable liquids like gasoline far from gas or electrical appliances, or even outside the house, is practicing fire safety. This makes sure that no source of fire will easily ignite the flammable liquid, thus, preventing the occurrence of fire.

Let's See What You Have Learned (page 33)

1. I will store the jars of sweets in a cabinet far from the stove or any source of fire. This will prevent the children from injuring themselves when looking for the candies while the stove or any fire source is being used.
2. I will ask my friend to completely put out his cigarette butts in the ashtray. I don't want him accidentally setting fire on a piece of furniture or on the house itself.

I will also ask him to keep his lighter in his pocket so that the children will not get curious and play with it, which might accidentally set something on fire and cause injury.

3. When I buy new furniture, I will make sure that I will choose furniture made of materials that will not easily ignite, catch fire or burn quickly.
4. I should not forget to put out the candle so there won't be any accidental fires.
5. When I buy my nieces and nephews clothes, I will make sure that the material of the clothes don't easily ignite or catch fire. I will also choose clothes that are easy to remove in case the garments catch fire.
6. I should store the paints and paint thinners away from electrical or gas appliances or other sources of fire. I will place them in a cabinet outside the house where the children won't be able to reach them and play with them.

E. What Have You Learned? (*pages 35–36*)

1. The fire was a Class "B" fire because it involved gasoline, which is a flammable substance. The bottle of gasoline was not stored properly. It was placed near the kitchen stove, where it exploded when the stove was turned on or while someone was cooking.
2. My neighbor suffered from third-degree burns. The burned areas on his body should be covered with freshly ironed towel or clean dressing moistened in soda solution. He should immediately be brought to a hospital for treatment.
3. My neighbor's wife suffered from second-degree burns. Her wounds should be immediately cleaned; burn ointment should be applied on them, and clean dressings should be used to cover them. She should also be brought to a hospital to make sure she has no other injuries.

4. The boy suffered from smoke inhalation. He should be immediately brought to the hospital because his airways were beginning to close due to the inside swelling of his throat.
5. The fire could have been prevented if they had stored the gasoline properly. They should have put it in a place far from a source of fire. Gasoline is a flammable liquid. Any contact with a fire source can easily ignite it and cause fire.



Glossary

Acrylic A kind of man-made fabric

Airway The passageway for air in the body that includes the mouth and throat

Burn An injury that mostly affects the skin. It is usually caused by fire, heat, electricity, etc.

Dermis The second or inner layer of the skin

Dressing A kind of bandage made of light material

Energized electrical equipment Materials and appliances that run by using electricity

Epidermis The outer layer of the skin

Fabric A cloth produced by hand or machine

Fiber A threadlike material used in making clothes

Fire Occurs when heat, fuel and oxygen combine

Fire-related injuries Injuries that are caused by or related to fire

First-degree burn A burn that affects only the outer layer of the skin, or the epidermis. There is redness and swelling, but not blistering.

Flammable liquids Liquids that are easily ignited and are capable of burning quickly

Fourth-degree burn A burn that affects the whole thickness of the skin and deeper parts of the body, like tendons, joints and bones. The skin is pale, brownish or brownish-yellow and is leathery.

Hazard Risk

Heat damage A result of smoke inhalation that is marked by burned nose hairs, burns around and inside the mouth, and the inside swelling of the throat

Ignite To set on fire

Ordinary combustibles Common materials that ignite and burn readily

Oxygen A gaseous element that living things, especially man, need to breathe and live

Polyester A man-made fabric that does not wrinkle easily

Rayon A man-made fabric that looks like silk

Second-degree burn A burn that affects the outer layer and part of the inner layer of the skin. There is blistering. Serious second-degree burns may need medical attention.

Shortage Lack; deficiency in something

Smoke inhalation Is the breathing in of harmful gases, vapors and tiny substances in smoke

Soda solution A mixture of water and baking soda

Surgery A procedure wherein the damaged area of the body is repaired using medical instruments and equipment

Third-degree burn A burn that affects the whole thickness of the skin. The skin turns pale, brownish or brownish-yellow, and becomes leathery.

Turpentine A kind of oil that easily evaporates.

Upholstered furniture Furniture supplied with stuffing, springs, cushions and fabric cover



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