

**High  
School  
Health**



**FIRE SAFETY FOR TEXANS**

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**A LIFETIME  
FOR FIRE  
SAFETY**

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**K - 12 Fire Safety Curriculum from the Texas State Fire Marshal**

# **Fire Safety for Texans**

The complete series from the State Fire Marshal's Office

Kindergarten

**Fire Safe Together**

First Grade

**Fire Safety: Any Time, Any Place**

Second Grade

**Making Me Fire Safe**

Third Grade

**Positively Fire Safe**

Fourth Grade

**Fire Safety: Stop the Heat**

Fifth Grade

**Charged Up For Fire Safety**

Sixth Grade

**Fire Safety Power**

Seventh Grade

**Responsible For Fire Safety**

Eighth Grade

**Fire Safety's My Job**

Health (High School)

**A Lifetime For Fire Safety**

Economics (High School)

**Fire Safety For Consumers**

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# **Introduction**

# Introduction

## Why teach fire and burn prevention?

Each year during the past decade, about 150 Texans have died in fires. The State Fire Marshal's Office is committed to reducing this alarming statistic. Analysis of fire statistics shows that the vast majority of fires — and the resulting fire deaths — could have been prevented. Regrettably, most people do not know or practice even simple actions that can prevent fires and burns.

The State Fire Marshal's Office believes the key to reducing fires and fire deaths is education. Fire safety education has traditionally been concentrated in elementary school observances of Fire Prevention Week. While these observances can produce effective results, thoughtful analysis of the fire problem and fire safety educational programs shows that more comprehensive, age-appropriate approach to fire safety education can multiply its benefits.

Recognizing the limits of classroom instruction time, the State Fire Marshal's Office has examined the Texas essential elements of instruction to determine the most appropriate topics with which to integrate fire prevention and fire safety. Teachers from across the state have provided feedback on topics appropriate for each grade level, kindergarten through high school.

The result of this extensive research is "Fire Safety for Texans," a series of curriculum guides teaching fire and burn prevention. Each grade-level program has been coordinated with essential elements in that grade and with the unique specific fire safety needs of that age group. The lesson plans have been field tested in classrooms across the state. On average, students who have been taught using these materials score 26 percent higher than students in control groups.

As you use this guide, you and teachers in other grade levels will be part of a continuum of fire safety education spanning all grades. The State Fire Marshal's Office believes this continuum will help create a generation of Texans who will be fire-safety aware. In turn, all Texans can benefit from a decrease in the number of needless fire deaths and an increase in safer homes and worksites — a benefit we all deserve.

## This Booklet

This booklet, "A Lifetime for Fire Safety," is specifically designed for high school health students. The following sections give specific information on the essential elements applicable to fire and burn prevention and on the age-specific needs of ninth- and tenth-grade students related to fires and burns.

You will also find additional information on the format and materials found in this booklet.

This booklet has three sections:

- **Lesson Plans.** This section includes all steps in the lesson cycle.
- **Teacher Materials.** This section includes all teaching aids and tests.
- **Student Materials — Duplicating Masters.** This section includes master copies of materials to be used by students.



**General Objectives:** To review comprehensive fire and burn prevention techniques and emergency actions

To develop an awareness of fire safety needs of all age groups

To focus on smoking and flammable liquids

**Essential Elements:** The student will be provided opportunities to:

Sec. 75.65 (a) 1A. understand the care of body systems and their functions

Sec. 75.65 (a) 1B. relate personal behavior to wellness

Sec. 75.65 (a) 1D. demonstrate responsible behavior concerning ... tobacco

Sec. 75.65 (a) 1E. exhibit skills in accident prevention, injury control and emergency action

Sec. 75.65 (a) 1G. identify components of comprehensive accident prevention programs

Sec. 75.65 (a) 2A. analyze messages of advertising for health resources and activities

Sec. 75.65 (a) 3D. describe the wide range of resources designed to protect and promote well being of people

Sec. 75.65 (a) 3E. investigate current health issues

## Background: Age Profile

Stage of identity vs. role confusion, which means the high school student needs experiences that will help establish his own identity. Lack of successful experiences may lead to confusion about his future role as an adult.

The teenager experiences variability in emotions, physical abilities and scholastic interests. She is becoming more concerned about sex roles and occupational choice, and will begin thinking about careers and future.

While the high schooler desires to be independent, acceptance by peers is very important. He may be easily influenced by peer pressure and have a

tendency to hero worship. The teenager may take risks and exhibit a tendency to test authority. She "tries on" different attitudes and actions.

As he becomes more proficient in formal operational thought, he is able to engage in mental manipulations. Thinking can be flexible, abstract and local. The high school student can apply his new thinking skills to many situations. Successful learning can take place through experience, hypothetical projections, role models, demonstrations, rehearsal and teaching others.

The teenager operates under a morality of cooperation. She views rules as mutual agreements and allows for intentions and extenuating circumstances.

### Fire And Burn Hazards

Cigarette smoking, especially combined with drugs and alcohol.

Cooking — contact with stoves or other appliances; hot liquids or grease while serving or cooking food, including job-related.

Flammable substances — gasoline, including use in car, storage in garage, use to start fire; explosive chemicals.

Burn from mechanical equipment — burns from exhaust, radiator, battery or welding on cars or motorcycles; gasoline; mini-bikes and lawn mowers.

Clothing ignition from careless smoking or cooking. Smoke and gas inhalation from fire.

Outdoor hazards — utility poles and high-tension wires; sunburn; fireworks.

**Teacher's Note On Materials:** Illustrations and activity sheets in this booklet are intended to serve as masters. Photocopy, and then use the photocopy as directed. Student pages may be compiled in booklets or distributed individually. The first page in the Student Materials section can serve as the title page for the student booklet.

**Pre-Test and Post-Test:** Conduct the pre-test prior to presenting the first lesson and the post-test following the fifth lesson.

**Teacher's Note On Closure Activities:** Several activities included in the closure phase of the lesson cycle may be effectively used in the next lesson's focus activity.

**KEY TO ICONS:** The following icons can be used to easily identify activities in the lesson plans:



Lesson objectives



Focus and closure



Creative group activity, including role playing



Lecture



Group problem-solving activity



Answering questions



Guest presenter



Investigation or research



Creative writing activity



Cut-and-paste activity



Group discussion



Drawing, artwork or illustration

# **Lesson Plans**

## LESSON ONE:

# The Needs Of All Persons

**Goal:** To review significant issues in fire safety, especially relating to personal responsibilities



**Objectives:** The student will:

- describe role of carelessness in fires and burn injuries, including cigarettes, heating and cooking
- describe general accident prevention and wellness needs of children, handicapped and senior citizens

**Materials:** Pretests (p. 15-16); student booklet title page (p. 31; optional; see Teacher's Note on Materials, page 2); "Fire In Texas" overhead transparencies (p. 17-18) and student activity sheet (p. 34-35); "Analysis Of Fires In Texas" activity sheet (p. 36); notebook/writing paper; answer keys (p. 27).



**Focus:** Administer pre-test.

Introduce unit on fire safety. List objectives of unit:

- To review comprehensive fire and burn prevention techniques and emergency actions
- To develop an awareness of needs of all age groups
- To focus on smoking and flammable liquids

Outline lesson objectives (paragraph above). Ask students about their general opinions of the need for fire safety awareness. Discuss briefly.



**Presentation Of Content:** Display the first page of "Fires In Texas" overhead transparency. Have students examine graphs titled "Types of Fires Reported in Texas, 2010" and "Fire Deaths By Type Of Fire." Distribute copies of "Fires In Texas 2010," then have students examine the two remaining graphs on the first page.



**Discussion:** Lead discussion on details of the graphs to the following conclusions:

- Although the largest number of fires occur outside, the largest number of deaths occur in building fires, most often in residential structures (homes).
- The two age groups most likely to die in fires are children under age 9 and adults over age 65.
- Handicapped persons may be limited in their abilities to react to a fire, as are many senior citizens.

Therefore, they deserve the same attention as senior citizens in the area of fire safety. (Statistics on actual fire injuries to handicapped persons are not available.)

- Males are more likely than females to die in fires.

Display the second page of "Fires In Texas" overhead and have student look at their second pages. Lead discussion on "Fire Deaths Reported In Residences" to conclusion that although large apartment buildings have the potential for a large number of fire deaths, the vast majority of fire deaths occur in one-family homes.

Have students look at the remaining graphs, which include information on fire causes. Each chart relates the causes of fires to fire damages (death, injuries and property loss). Continue with guided practice activity.



**Guided Practice:** Distribute "Analysis of Fires In Texas" activity sheet. Have students read the names and descriptions of the causes. Lead students in examining the graphs and answering questions. Emphasize conclusion that many fires, perhaps most, could be prevented.



**Independent Practice:** *Opinion development and writing activity:* Have students prepare position papers or editorials advocating awareness of fire prevention. The papers must be based on one of these topics:

- The role of carelessness in causing fires and burns
- Reducing carelessness with cigarettes, heating equipment and cooking appliances
- Fire safety needs of children, handicapped persons and/or senior citizens

The paper must include at least two specific supporting examples (statistics, anecdotes, etc.) presented during the lesson; additional research is not required. Evaluate papers on validity of the examples and their relationship to the position taken. Papers that do not support fire safety awareness are not acceptable.



**Reteaching:** Have students prepare logs or diaries of daily activities relating to personal habits in smoking, cooking or operating heating equipment. Review logs or diaries, and note activities that could cause fires or burns.



**Enrichment:** Have students prepare plans for assisting child(ren), handicapped or senior citizen in their families or neighborhoods.

Submit position papers or editorials for publication in school or city newspaper.



**Closure:** Have three students describe the basic premise of their papers, each reflecting a different topic. Ask student which age groups merit the most attention in fire safety (young children and seniors).

Introduce the next lesson by telling student that many types of resources and fire-safety aids are available and that the next lesson will begin an exploration of some of those resources.

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## LESSON TWO:

# Problems

**Goal:** *To focus on special fire safety problems, especially those relating to young adults*



**Objectives:** The student will:

- identify and describe flammable liquid warnings on home-use products, cleaners, gasoline, etc.
- describe fire safety precautions related to gasoline, autos, outdoor tools and discarded cigarettes

**Materials:** "Product Labels" (p. 19) and "Warning Labels" (p. 20) overhead transparencies; "Product Warning Labels" student information sheet (p. 37); "Problem Cards And Suggested Solution Cards" (p. 21); "Product Warning Labels" research activity sheet (p. 38); answer keys (pp. 27-29).



**Focus:** Review basic information from Lesson One, focusing on the value of fire prevention efforts.

Display Product Label overhead transparency. Have students list some ways that companies try to persuade consumers to buy and use the products. Ask whether any of the products are dangerous. Outline lesson objectives (see paragraph above).



**Presentation Of Content:** Add Warning Label transparency to match to product labels. Tell students that electrical appliances also have warning labels regarding fire and electrical shock prevention. Discuss the value of warning labels and the importance of following the warnings exactly. Ask why a flammable liquid must be stored with the lid tightly closed (to prevent the flammable vapors from escaping and possibly being exposed to a flame or spark and igniting).



**Group discussions:** Divide students into five groups, and assign one product and warning label to each group. Have the groups discuss their personal awareness of the product warnings and their personal reactions to the warnings.



**Guided Practice:** *Group problem-solving activity:*

Assign each group one problem card. Have each group select a reporter to record their activities. Have the students answer the questions and prepare possible solutions. When each group has reached a conclusion, distribute the Suggested Solution card and have students compare their solution to the suggested solutions.

**Group reports and whole-class activity:** Have the group reporters present their conclusions to the entire class. Allow students to discuss disagreements with the suggested solutions.



**Independent Practice:** *Investigation:* Distribute Product Warning research activity sheets. Have the students research products in their homes.

**Optional:** Have students meet in their groups and compile group reports.



**Reteaching:** Have students explain why relocation of flammable products (gasoline, paint thinners, cleaning fluids, etc.) might be necessary. Include a discussion of what might happen if flammable products are not handled properly.



**Enrichment:** Have students prepare graphs of the number and types of products with flammability warning labels stored at home. Additional suggestion: prepare pictorial graph showing locations of flammable products in home.



**Closure:** If appropriate, post group reports. Have students review and restate the major types of warnings. Re-emphasize that flammable liquids should be stored in tightly closed containers.

Introduce next lesson by telling students that they will be conducting special activities that can make their homes safer today and in the future.

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## LESSON THREE:



# Taking Charge

**Goal:** To apply fire safety knowledge by conducting a home fire hazard inspection and clean-up



**Objectives:** The student will:

- organize and conduct comprehensive home inspection, including outdoors and non-living areas
- organize and conduct comprehensive home hazard removal or clean-up, including outdoors and non-living areas

**Materials:** "Home Inspection Worksheet" activity sheets (p. 39); "Home Inspection Checklist" activity sheets; (pp. 40-41); answer keys (pp. 29-31).



**Focus:** Ask students if they have ever thought of themselves as leaders in their homes. Discuss what responsibilities a leader has and how they might be leaders in fire safety. Tell them that two activities in this lesson will give them an opportunity to serve as leaders for their families. Outline lesson objectives (paragraph above).



**Presentation Of Content:** *Discussion:* Review information from previous lessons on the various types of fire hazards found in the home. Discuss how the knowledge of fire hazards can be applied to making the home more safe (Accept all reasonable answers, such as changing habits in cooking or smoking, properly discarding old flammable liquids, etc.). Lead discussion on the value of a comprehensive inspection to check for fire hazards and the role of fire safety inspectors.



**Guided Practice:** *Group solution-synthesis activity:*

Divide the students into six groups (you may wish to vary groups from previous lesson to encourage student interaction). Assign each group one of the following areas of the home: bedrooms, living areas (den, living room, family room), bathrooms, kitchens, garage and workroom, outdoors. Distribute Home Inspection worksheets to the respective groups.

Have students complete the worksheets, then combine their results to develop an overall inspection plan. Compare to the Home Inspection checklist published by the State Fire Marshal's Office. Note any items that the students included that are not on the State Fire Marshal's Office checklist.

Discuss how the students can get their parents/guardians and other family members interested in conducting fire hazard inspections in their homes. Have the students list ways that they can ask their parents to help them conduct inspections and remove hazards.



**Independent Practice:** *Investigation with family participation:* Distribute Home Inspection Checklists. (To increase student participation, you may wish to reproduce the student-prepared list, adding items from the State Fire Marshal's Office list that were omitted on the student list.) Ask the students to work with their parents or other adults in the home to look for fire hazards and clean up or remove any problems. Remind the students that many items included on the checklist are very dangerous and that their parents must be involved in this activity.

Talk privately with any student who seriously indicates that an adult may not be available. Encourage the student to look for fire hazards, but to avoid touching or moving any dangerous item.

Evaluate the students on their willingness and interest in this activity. Grading based on the inspection itself (such as, number of problems found or corrected) is discouraged.



**Reteaching:** Have a school safety professional talk to the students about how the school cooperated with the local fire marshal for building safety inspections. The talk should focus on the value of working together for the safety of the students. The safety professional may include information on things that students do that create hazards. Discussion of past "building code violations" should be avoided.



**Enrichment:** Have students research the purpose of building codes and fire codes. Additional suggestion: research local building and fire codes (sources: local fire marshal, building inspector, city administrator).



**Closure:** Have students share some results of their home hazard survey. Include information on the kinds of hazards that were corrected. Have students — without looking at their surveys — list some of the items on the checklist. Encourage them to keep their checklists for future use. Ask students who had parent and/or family participation how they felt about having a leadership role in their family.

Introduce next lesson by telling students that their study of fire safety will continue a close look at what to do if a fire or burn does occur.

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## LESSON FOUR:

# Helping Others

**Goal:** *To explore how individuals and organizations can contribute to fire and burn safety*



**Objectives:** The student will:

- describe best actions in suspected fire or smoke situations and first aid for three types of burns
- list at least five community health services and other resources that assist in community fire safety

**Materials:** "Fire and Burn Scenarios" role-playing activity cards (p. 22); "Not Just Acting" observation activity sheet (p. 42); "Helping Others" activity sheet (p. 43); answer keys (pp. 32-32-A).



**Focus:** Describe an exciting emergency scene from a movie or television show, perhaps from re-creations on the national "Rescue 9-1-1" or local "Crime Stoppers" programs. Ask how students feel when they see those re-creations. Remind them that those scenes frequently involve actors, but that if they are ever in an emergency situation they won't be able to rely on actors — they'll have to act for themselves.

Introduce lesson by telling students that they will be actors for several role-playing activities that will give them an opportunity to act out proper responses to emergencies. Outline lesson objective (paragraph above).



**Presentation Of Content:** *Role-playing activity and observation:* Distribute role-playing activity cards "Fire and Burn Scenarios" to selected students and "Not Just Acting" observation activity sheets to all students. Based on roles assigned and described, have students demonstrate reactions to various emergency situations. Note: In all scenarios, person A acts or speaks first, followed by person B. Have students observe the activities and write down their observations on their "Not Just Acting" observation activity sheets.



**Guided Practice:** *Continue role-playing activity:* To facilitate transfer and application of information, have additional students present un-cued responses.



*Follow-up discussion:* Following demonstration on service organizations, discuss other types of agencies

or organizations in the community that could provide support for fire prevention, fire survival, etc.



**Independent Practice:** *Complex problem-solving activity:* Distribute "Helping Others" activity sheets. Have students complete the flow charts to show appropriate actions and/or interactions with community health services in emergency scenarios.



**Reteaching:** Invite a fire department representative to discuss how the fire department interacts with other agencies, such as the Department of Health, burn centers and Salvation Army.



**Enrichment:** Have students research consumer-safety organizations such as Underwriters Laboratory and the Consumer Product Safety Commission.



**Closure:** Review selected questions from "Helping Others" activity sheets. Ask students how they felt about the various scenarios at the beginning of the lesson. Have them compare to how they would feel about actually using those actions in an emergency situation now. Review the three degrees of burns and appropriate first response for each.

Introduce Lesson Five by telling students that they will organize their own community service group to conduct the final lesson of the unit on fire safety.

## LESSON FIVE:

# Smoking Safety

**Goal:** *To focus on eliminating or reducing the hazards of cigarette smoking*



**OBJECTIVES:** The student will:

- identify and describe cigarette health messages
- write cigarette fire safety messages

**Materials:** "Careless Smoking Fires" overhead transparency (p. 23) and background information sheets (p. 44); "Public Service Announcements" overhead transparency (p. 24) and background information sheets (p. 45); materials for creative work (writing paper, drawing paper and supplies, tape recorders, etc.); answer keys (pp. 25-32-A)



**Focus:** Review information from Lesson Two on product warning labels, including the value of product safety messages. Briefly review what kinds of messages companies use to persuade consumers to purchase and use products. Tell them that in this lesson they will create their own persuasive messages. Outline objectives (paragraph above).



**Presentation Of Content:** Distribute "Careless Smoking Fires" background information sheets. Display overhead transparency, if desired. Read and discuss statistics and anecdotes. Lead discussion to the conclusion that cigarette smoking creates a fire hazard. Emphasize hazard of smoking in bed.

Read and discuss cigarette health warning labels and their purpose to inform about health hazards. Discuss types of information that might be included in cigarette fire safety warning labels.



**Guided Practice:** *Group brainstorming activity:*

Introduce problem-solving activity based on students as an advocacy group. Discuss the purpose of the group. Note that this group does not have to be anti-smoking, although some may choose that position. Encourage some groups to focus on how people who won't stop smoking can be safer.

Divide the students into small groups (two to six people). Have the student develop persuasive statements advocating placement of fire safety messages on cigarette packages. Hint: Give students three minutes to jot down ideas before beginning group discussion.



**Independent Practice:** Distribute "Public Service Announcements." Briefly discuss the purpose and application of public service messages.



**Creating original, persuasive material:** In small groups, have students prepare public messages. They may select from the following:

- Public service announcement that might be read on the radio.
- Public service announcement for television.
- Fire safety warning messages for cigarette packages
- Advertisement or short article for newspaper or magazine.

Encourage students to critically review their work and rewrite to optimum effectiveness. They may find it productive to ask other students' opinions of their materials during the draft process.



**Reteaching:** Have the students participate in role-playing activities focusing on peer pressure and hazardous behavior. Examples: throwing cigarette butts out of car windows; climbing electrical poles; smoking while pumping gasoline, working on the car or using flammable liquids, especially paints and paint thinner.



**Enrichment:** Have students research one of the other major causes of fires and fire deaths:

- Careless cooking
- Heating equipment, including portable heaters, central heating systems, water heaters
- Arson

The research report might include a description of the cause and the number of fires, fire deaths and dollar value of property loss. An analysis of how the type of fire occurs might also be included.



**Closure:** Have student groups present and/or display their cigarette fire safety messages. Conclude with a general discussion of the content of the unit and the students' personal reflections on fire safety.

**Administer post-test.**



# **Teacher Supplemental Materials**



Name \_\_\_\_\_

Health (High School): **A Lifetime For Fire Safety** PRE-TEST

**Circle True or False.**

- 1. Most fires are purely accidental and cannot be prevented. True False
- 2. Simply being more careful with fire hazards can reduce the chance of having a fire. True False
- 3. Smokers can smoke in bed as long as they are very careful. True False
- 4. A fire will start right away if a cigarette falls on upholstered furniture, like a sofa. True False
- 5. Smokers need to be more careful about fire safety than non-smokers. True False
- 6. Smoking near flammable liquids is very dangerous. True False
- 7. Gasoline is a flammable liquid. True False

**Give the best answer:**

- 8. Name the two age groups that suffer the largest number of fire deaths:  
\_\_\_\_\_ and \_\_\_\_\_
- 9. How can flammable liquids be easily identified? \_\_\_\_\_
- 10. How should flammable liquids be stored? \_\_\_\_\_
- 11. Name a community resource (person, agency, organization, etc.) that can help after a fire or to prevent a fire, other than a fire fighter: \_\_\_\_\_
- 12. List how to identify each type of burn and appropriate actions for each:

How to identify	Appropriate action
First degree _____	_____
Second degree _____	_____
Third degree _____	_____

- 13. What should you usually do first in each of the following situations?  
Clothes on fire \_\_\_\_\_  
See smoke coming from a house \_\_\_\_\_  
Hear smoke alarm while sleeping \_\_\_\_\_

(continued)

Teacher: Use with Lesson One, Page 7. Duplicate for student use.

**Complete the following lists with appropriate examples:**

14. Gasoline is very flammable and should not be stored in the home. Name three types of flammable liquids (other than gasoline) that are more commonly found or used in the home:

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15. Name three types of appliances that are frequently involved in fires:

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16. List 10 items that should be included in a home fire hazard inspection:

1. 

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2. 

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3. 

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4. 

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5. 

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6. 

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7. 

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8. 

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9. 

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10. 

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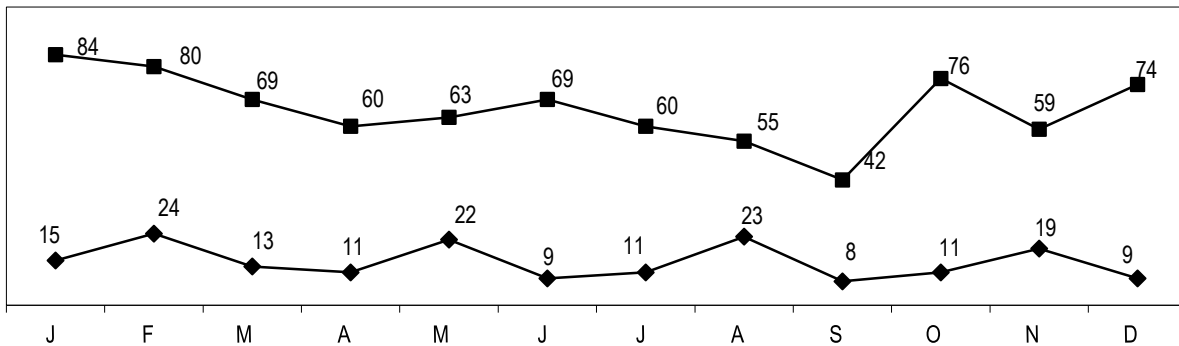
## Fires in Texas 2010

In 2010, Texas fire departments reported 76,781 fires thru the Texas Fire Incident Reporting System (TEXFIRS). As a result of these fires, 175 civilians lost their lives, 791 civilians were injured and \$510,113,505 in property loss was realized.

The data collected through TEXFIRS can help determine areas at risk and target effective fire prevention programs.

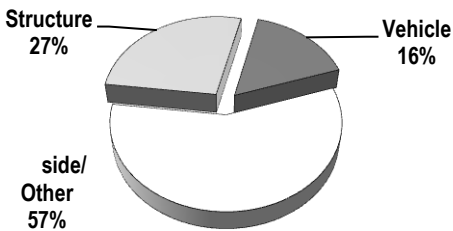
2010 Type of Fires	Total Fires	Civilian Injuries	Civilian Deaths	Dollar Loss
Structure fires	20,595	671	120	\$424,295,871
Vehicle fires	12,435	67	52	\$60,222,964
Natural & cultivated vegetation fires	22,058	16	2	\$18,714,470
Outside rubbish fires	16,568	8	0	\$437,003
Fires, other	2,854	10	1	\$3,559,447
Special outside fires	2,271	19	0	\$2,883,750
	<b>76,781</b>	<b>791</b>	<b>175</b>	<b>\$510,113,505</b>

Civilian Fire Injuries (■) and Deaths (◆) by Month



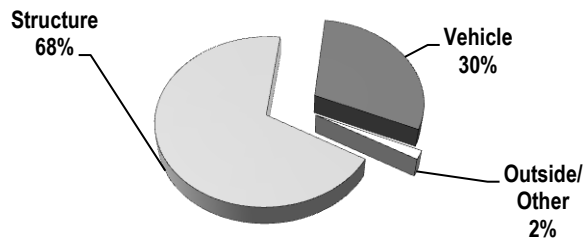
All Type of Fires

Structure	20,595	27%
Vehicle	12,435	16%
Outside/Other	43,751	57%
	<b>76,781</b>	



Fire Deaths by Type of Fire

Structure	120	68%
Vehicle	52	30%
Outside/Other	3	2%
	<b>175</b>	



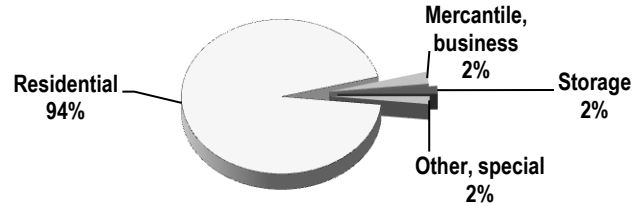
## Fires in Texas 2010

In 2010, there were 20,595 structure fires reported throughout the state. Seventy-nine percent (16,250) of those fires occurred on residential type property.

Residential structure fires resulted in 619 civilian injuries, 113 civilian deaths, 299 fire service injuries and an estimated \$284,528,457 in property loss.

### Fire Deaths by Type of Structure

Residential	113
Mercantile, business	3
Storage	2
Other, special	2
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	120

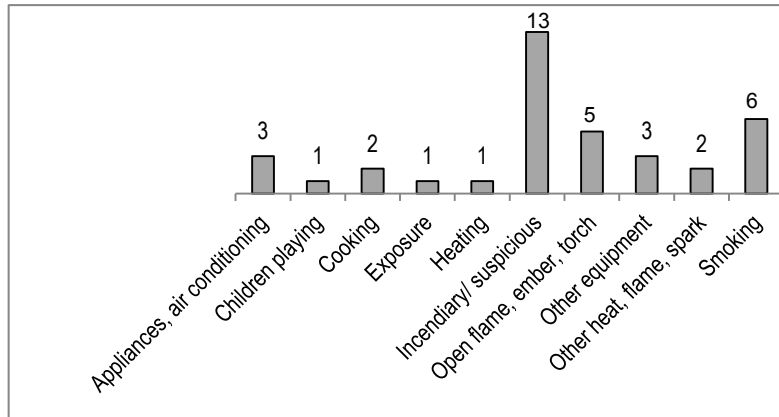


### Area of Fire Origin in Residential Structure Fires

Cooking area, kitchen	5,537	Common room, den, family or living room, lounge	504
Bedroom for less than 5 persons; included are jail or prison cupola	1,251	Wall surface: exterior	463
Laundry area	660	Undetermined	2,051
Vehicle storage area: garage, carport	529	All Other	4,745
	510		

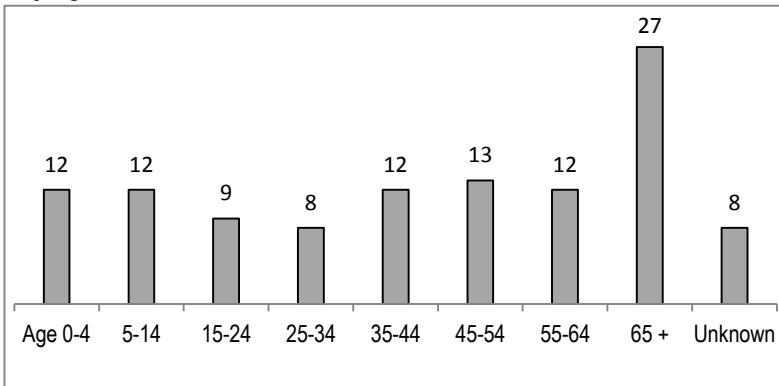
### Cause in Fatal Residential Structure Fires

Appliances, air conditioning	3
Children playing	1
Cooking	2
Exposure	1
Heating	1
Incendiary/ suspicious	13
Open flame, ember, torch	5
Other equipment	3
Other heat, flame, spark	2
Smoking	6



### Residential Structure Fire Civilian Deaths by Age

Age 0-4	12
5-14	12
15-24	9
25-34	8
35-44	12
45-54	13
55-64	12
65 +	27
Unknown	8



## Product Labels

**DISINFECTANT**  
**SPRAY**

**ELIMINATES**  
**ODORS**  
KILLS  
HOUSEHOLD  
GERMS,  
MOLD AND  
MILDEW

Polyurethane

**LIQUID**  
**PLASTIC**

**Super Glass**

**DANGER!**  
COMBUSTIBLE  
HARMFUL OR FATAL IF  
SWALLOWED. Read  
complete precautions on  
back panel.

HYPO-ALLERGENIC

**LIQUID**  
**HAIR SPRAY**

Extra hold  
USED BY PROFESSIONALS

**INTERIOR/EXTERIOR ENAMEL**

**SPRAY PAINT**

**DANGER: EXTREMELY FLAMMABLE, CAN PRESSURIZED.**  
**HARMFUL OR FATAL IF SWALLOWED, VAPOR HARMFUL.**  
Read Caution Details on Back Panel Before Using.

**SPRAY**  
**STARCH**

- BODY WITHOUT STIFFNESS
- SPRAYS ON EVENLY
- EASIER AND FASTER

Teacher: Use with Lesson Two, Page 8. Transfer to overhead transparency.

## Warning Labels

### **PHYSICAL HAZARDS:**

**Flammable:** Contents under pressure. Do not use near fire, sparks or flame. Do not puncture or incinerate container, exposure to temperatures above 130°F may cause bursting. Do not use on polished wood furniture, rayon fabrics or acrylic plastics.



**DANGER! CONTAINS MINERAL SPIRITS. COMBUSTIBLE. HARMFUL OR FATAL IF SWALLOWED.** Keep away from heat and open flame. Avoid contact with skin, eyes and clothing. Avoid breathing of vapors.

To avoid spontaneous combustion, soak oily cloths and rags in water after use or place in closed metal container away from buildings and combustible materials.

### **Warning: Flammable.**

Avoid fire, flame or smoking while handling and until hair is fully dry. Avoid spraying near eyes. Keep out of reach of children.

### **CAUTION:**

**KEEP OUT OF REACH OF CHILDREN.**

**DO NOT INCINERATE (BURN) CAN.**

**AVOID HEAT. KEEP CAN BELOW 120°F.**

High temperature may cause bursting. Do not place can on radiator, stove in direct sunlight or near other heat sources.

**DO NOT PUNCTURE CAN.** Contents under pressure will discharge.

**AVOID OPEN FLAMES, SPARKS, and PILOT LIGHTS.**

**DO NOT SMOKE.** Vapor may ignite explosively.

**CAUTION:** Use only as directed. Do not take internally. Do not PUNCTURE OR INCINERATE CONTAINER. Do not expose to heat or store at temperatures above 120°F. Do not use near flame. Avoid spraying on hard-surface floors as residue could make them slippery.

**KEEP OUT OF REACH OF CHILDREN.**

# Problem Cards and Suggested Solution Cards

## Group Problem-Solving Activity

### Problems

❶ You discover that many paints, solvents and cleaning solutions are stored in a cabinet over the stove. What should you do?

What should you do about flammable products that must be used in the kitchen, such as cooking oil?

❶ Inform your parents. Help them locate safer storage places away from heat.

Use flammable products such as cooking oil with great care. Always follow directions, and never leave cooking unattended.

❷ Your parent is building a bookcase, using a power saw outdoors. What can you do to help him/her be safe?

After painting the bookcase using enamel paint (which is flammable), your parent puts the paint brushes, paint, paint thinner and dirty rags in a closet near the water heater. What should you do?

❷ Remind your parent to read (or re-read) the directions for the power saw before using. Never use near water or while raining. Unplug when not in use.

Tell your parent about the danger of fire. Help them locate a safe storage place for the paint and cleaner. Properly clean the brushes. Safely throw away the dirty rags.

❸ Your friend is smoking a cigarette while pumping gasoline in her car. What should you do?

Another friend carries a half-full container of gasoline in his car for emergencies. What should you do?

❸ First have her move away from the gas pumps. Then make her put out the cigarette completely and then throw in a trash can away from the gas pumps.

Remind him how flammable and dangerous gasoline is. Have him take the gasoline out of his car and store safely away from any buildings.

❹ You are planning a party at your home. Some of your friends smoke. What should you plan to do to prevent a fire?

During the party, you plan to cook out on a gas grill. What safety rules should you follow?

❹ Have large ashtrays available. Watch anyone who smokes to make sure cigarettes or ashes don't fall on furniture. Don't allow smoking while drinking. Carefully check all furniture for smoldering cigarettes before leaving or going to sleep.

Re-read the directions for the grill. Never leave the grill unattended while cooking. Don't smoke near the grill. Be sure all controls are turned off completely when finished cooking.

❺ In your bathroom, you will probably find several warning labels. What kinds of items might they be?

What should you do with these items?

❺ Hair dryer, electric shaver, electric curlers (electrical shock warning); hair spray, cologne, after-shave lotion, alcohol (flammable product warning). You should do exactly what the label directs. You should find safer storage places for flammable products whenever possible.

Teacher: Use with Lesson Two, Page 8. Copy, cut apart and distribute to student groups.

# Fire and Burn Scenarios

## Role-Playing Activity Cards

<p><b>Scene 1: Planning for fire emergencies</b></p> <p><b>Student A:</b> Tells B that a news story about a fire has her worried: "How do we know what to do in a fire. We don't even have a fire alarm."</p> <p><b>Student B:</b> Tells A that having a fire escape plan will help; tells her to make plan that gives everyone two ways out of each room and sets up a meeting place away from the house. Tells her to get a fire alarm and check it each month.</p>	<p><b>Both:</b> Pretend to be sleeping</p> <p><b>Student A:</b> Hears a smoke alarm, wakes B.</p> <p><b>Student B:</b> Tells A they need to crawl out under any possible smoke.</p> <p><b>Both:</b> Crawl out of room, go to neighbor's house, call 9-1-1 (or local emergency number) and report fire at (insert address).</p>
<p><b>Student A:</b> Pretends to be cooking; pan catches fire</p> <p><b>Student B:</b> Tell A to put a lid or large cookie sheet over the top of the pan.</p> <p><b>Student A:</b> Puts on lid; fire goes out.</p>	<p><b>Student A:</b> Pretends to be ironing; burns hand.</p> <p><b>Student B:</b> Makes A put hand under cool running water. Notes that it is red but has no blisters, so it's a first-degree burn.</p>
<p><b>Student A:</b> Pretends to be working on car; touches arm against the hot engine and has a burn.</p> <p><b>Student B:</b> Makes A put arm under cool running water. Notes that it is red and blistering, so it must be a second-degree burn. Bandages with sterile bandage. Suggests they go to doctor's office or emergency room.</p>	<p><b>Student A:</b> Pretends to be starting a gas grill. Pants catch on fire.</p> <p><b>Student B:</b> Makes A roll on the ground to put out fire. Notes that the burn is gray and dry, so it must be a third-degree burn. Calls 9-1-1 (or local emergency number).</p>
<p><b>Student A:</b> Tells B that a neighbor had a fire and doesn't have a place to live. Also a child had severe burns and the everyone is very worried.</p> <p><b>Student B:</b> Tells A that the local Red Cross has a program to help and that the fire department can give them other references for help. Special hospitals, like the Shriners Burn Center, are designed to treat burn patients; even local hospitals have burn units and they can help find special groups to help the family.</p>	<p><b>Student A:</b> Tells B that he is concerned about his grandparents and several other senior citizens in their neighborhood because they seem to be unaware of fire hazards and can't get around well.</p> <p><b>Student B:</b> Tells A to call the fire prevention office of the fire department; they can put on a special presentation to tell them about fire safety and can even help them install smoke alarms, make an escape plan and check for fire hazards.</p>

Teacher: Use with Lesson Four, Page 10. Copy, cut apart and distribute to student groups.

# Careless-Smoking Fires

## Background Information

### Smoking Related Fires

During 2010, 6 people died in 439 residential fires related to smoking. Generally, a fire listed as a smoking related fire starts when someone, sometimes even the victim himself, did not dispose of cigarettes or matches properly.

#### Smoking Related Fires In Living Rooms

One person died in a fire that started in living room. There were twelve fires that began in living rooms, probably caused by smoking. Among those fires, only seven homes had a working smoke detector.

The victims were:

- ♂ Males, none.
- ♀ Females, age 51.

#### Smoking Related Fires In Bedrooms

Seven people died in 260 different fires that started in bedrooms. Common starting locations: bedding (sheets and blankets)

The victims were:

- ♂ Males, age 25 and 26.
- ♀ Females, age 59, 68, 81, 83 and 87.

Among the known causes of fatal fires in one- and two-family dwelling, smoking a leading cause of deaths. warning labels Arson and heating-related fires caused more deaths.

### Smoking Related Fires

### Cigarette Health Warnings

The U.S. Surgeon General's Office requires health warning labels on cigarette packages and in cigarette advertising. Here are examples of those.

SURGEON GENERAL'S WARNING:  
Quitting Smoking Now Greatly Reduces  
Serious Risks to Your Health

SURGEON GENERAL'S WARNING:  
Cigarette Smoke Contains  
Carbon Monoxide

SURGEON GENERAL'S WARNING: Smoking  
Causes Lung Cancer, Heart Disease,  
Emphysema, And May Complicate Pregnancy.

SURGEON GENERAL'S WARNING: Smoking  
By Pregnant Women May Result in Fetal Injury,  
Premature Birth, And Low Birth Weight.

Teacher: Use with Lesson Five, Page 11 Transfer to overhead transparency.

# Public Service Announcements

## Background Information

**Public service announcements (PSAs)** are messages that promote a cause or provide information. Some PSAs appear in magazines and newspapers. Others appear on television and radio stations. You can recognize a PSA by the words "A public service of this station (or the publication)" or a similar phrase.



Remember, Only YOU can prevent forest fires!



**NEED KNOWS NO SEASON**

Teacher: Use with Lesson Five, Page 11. Transfer to overhead transparency.



CHECK  
YOUR  
HOT  
SPOTS

With proper use, portable electric space heaters provide warmth and comfort. But space heaters need their space. They aren't drying racks or toasters! Keep anything combustible at least three feet from an electric space heater!

If you have questions, ask the fire department. Fire prevention is their mission. Make it yours too.

**WRONG EXIT**  
YOU COULD LEARN A LOT FROM A DUMMY. [CLICK FOR DETAILS.](#)





Name \_\_\_\_\_

Health (High School): **A Lifetime For Fire Safety**

**PRE-TEST & Post-Test Answer Key**

**Circle True or False.**

- 1. Most fires are purely accidental and cannot be prevented. True **FALSE**
- 2. Simply being more careful with fire hazards can reduce the chance of having a fire. **TRUE** False
- 3. Smokers can smoke in bed as long as they are very careful. True **FALSE**
- 4. A fire will start right away if a cigarette falls on upholstered furniture, like a sofa. True **FALSE**
- 5. Smokers need to be more careful about fire safety than non-smokers. **TRUE** False
- 6. Smoking near flammable liquids is very dangerous. **TRUE** False
- 7. Gasoline is a flammable liquid. **TRUE** False

**Give the best answer:**

- 8. Name the two age groups that suffer the largest number of fire deaths:  
Young children and Senior Citizens
- 9. How can flammable liquids be easily identified? Warning labels
- 10. How should flammable liquids be stored? Tightly closed, away from heat
- 11. Name a community resource (person, agency, organization, etc.) that can help after a fire or to prevent a fire, other than a fire fighter: Red Cross, Salvation Army, local or state social service agency
- 12. List how to identify each type of burn and appropriate actions for each:

	<b>How to identify</b>	<b>Appropriate action</b>
First degree	<u>Red</u>	<u>Cool with running water</u>
Second degree	<u>Red and blistery</u>	<u>Cool with water, see doctor</u>
Third degree	<u>Dry and grey</u>	<u>Call 9-1-1, don't try to remove clothing from burn area</u>

- 13. What should you usually do first in each of the following situations?  
Clothes on fire Drop to ground, roll over and over  
See smoke coming from a house Call 9-1-1  
Hear smoke alarm while sleeping Crawl under smoke until you are outside, go to meeting place

(continued)

Teacher: Use with Lesson One, Page 7. Duplicate for student use.

**Answer Key: Pre- and PostTest, Page 2**

Complete the following lists with appropriate examples:

14. Gasoline is very flammable and should not be stored in the home. Name three types of flammable liquids (other than gasoline) that are more commonly found or used in the home:

<u>PAINTS, PAINT THINNER/SOLVENT</u>	<u>(OTHER REASONABLE</u>
<u>HAIR SPRAY, COOKING OIL</u>	<u>ANSWERS MAY</u>
<u>CLEANER, LIGHTER FLUID</u>	<u>BE ACCEPTED)</u>

15. Name three types of appliances that are frequently involved in fires:

<u>COOKING EQUIPMENT</u>
<u>HEATING EQUIPMENT</u>
<u>POWER TOOLS</u>

16. List 10 items that should be included in a home fire hazard inspection:

1. SEE PAGES 39-41
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

Name \_\_\_\_\_

## Analysis of "Fires In Texas 2010"

## ANSWER KEY

Data Analysis Activity Sheet

**Arson:** Officially called "incendiary" or "suspicious." Evidence proves the fire was intentionally set, or circumstances indicate the fire may have been set on purpose.

**Children playing:** The fire was caused by a child or children playing with matches, lighter or other type of heat source (such as, flame in a heater or hot heating element on a stove).

**Smoking:** The fire was the result of careless smoking. Examples: letting hot ashes of cigarette butts fall on furniture, not completely putting out a cigarette before putting in a trashcan, and smoking in bed.

**Heating:** The fire started with heating equipment, including central heating systems, local heating equipment (including portable heaters, wall heaters, fireplaces) and water heaters.

**Cooking:** The fire started with food or grease, usually left unattended in a pan or hot cooking appliance.

**Electrical distribution:** The fire started in electrical wiring, circuit boxes, switches or similar equipment within the structure itself. Does not include extension cords.

**Appliances, AC:** The fire started in an appliance, including central and room air conditioners. Includes kitchen equipment (unless food caught fire first), hair dryers and other personal appliances, and power tools.

**Open Flame, Torch:** The fire was caused by an open flame not associated with any other specified equipment. Most common: matches, lighters, welding and cutting torches.

**Other heat:** A source of heat not associated with any other specified equipment started the fire.

**Other equipment:** The fire was caused by equipment not specified in other groups. Most commonly includes industrial or special-use equipment.

**Natural:** The fire was caused by natural events, most commonly lightning.

**Exposure:** The fire started as a result of a nearby fire. Most commonly occurs in adjoining buildings.

**Unknown:** Based on available evidence, the cause of the fire cannot be determined .

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Using the graphs in "Fires In Texas, 2010," answer the following questions about fires in homes:

1. What caused the largest number of fatal fires?  
**INCENDIARY/SUSPICIOUS**  
How many fires? **13**
2. What known areas placed first and second in the number of fires in home? **KITCHEN**  
**BEDROOM**
3. What type of structural fire caused the largest number of deaths? **RESIDENTIAL**  
About how many deaths? **113**
4. What known causes placed second and third in the number of fatal fires? **SMOKING**  
**OPEN FLAME, ENBER, TORCH**
5. What age groups placed first, second, and third in the number of fire fatalities?  
**FIRST: 65+; SECOND: 45-54**  
**THIRD: 0-14, 35-44, 55-64**
6. What known fire types placed first, second and third in the amount of dollar loss caused by fires? **STRUCTURE, VEHICLE, NATURAL**  
**AND CULTIVATED VEGETATION FIRES**
7. Based on this information, what three types of fires do you think Texans should be concerned about? **ACCEPT REASONABLE ANSWERS:**  
**ARSON, COOKING, HEATING, OPEN**  
**FLAME, SUCH AS CANDLES**
8. Do you think that fires will be reduced if everyone is more careful with fire hazards (things that can cause fires, such as cigarettes, heaters and cooking equipment)?  
**ACCEPT REASONABLE**  
Why? **ANSWERS**  
\_\_\_\_\_  
\_\_\_\_\_

Teacher: Use with Lesson One, Page 7. Duplicate for student use.

Name \_\_\_\_\_

## Product Warning Labels

## ANSWER KEY

Investigation Activity Sheet

Look around your home. What flammable products are kept there? What suggestions do you have for storing these items safely?

*Examples:*

Fancy Hair-do

Hair spray

Bathroom cabinet

None

Zip-Ease

Paint stripper

Cabinet under  
kitchen sink

Metal cabinet in  
storeroom

Kitchen

**ACCEPT REASONABLE ANSWERS.**

**COMMON HAZARDS ARE LISTED.**

**FLAMMABLE LIQUIDS AND SPRAYS**

**ENCLOSED CABINET AWAY FROM HEAT**

Bathroom

**FLAMMABLE SPRAYS, COLOGNES, ALCOHOL, POLISH REMOVER**

**ENCLOSED CABINET AWAY FROM HEAT**

Garage/Utility Room/ Store Room

**FLAMMABLE SPRAYS, CLEANERS, PAINT, PAINT THINNER, OILY RAGS**

**ENCLOSED CABINET AWAY FROM HEAT. DISCARD UNNEEDED ITEMS SAFELY**

In Car/Truck

**GASOLINE**

**DO NOT STORE**

**SEE ALSO GARAGE ABOVE.**

Other

Teacher: Use with Lesson Two, Page 8. Duplicate for student use.

Name \_\_\_\_\_

# Home Inspection Worksheet

# ANSWER KEY

Student Planning Worksheet

Room or section of the house assigned \_\_\_\_\_

❶ In the first column, make a list of fire hazards (items or actions that might cause or create fires) that might be found in the room or section of the house. Consider these factors:

- ↗ Electrical appliances that might be used or kept in the room.
- ↗ Heating equipment that might be used in the room.
- ↗ Ages and characteristics of people that might sleep in the room.
- ↗ The need for smoke alarms or fire extinguishers.
- ↗ What activities the room is used for or that might be done in the room (cooking, sleeping, smoking)

❷ In the second column, list why that item, object or action is a fire hazard.

❸ In the third column, list what should be done to correct the hazard, or at least to reduce the hazard as much as possible.

*Examples:*

Stacked-up newspaper	Can easily catch fire	Throw out
Broken toaster	Can catch bread on fire	Have repaired

**ACCEPT REASONABLE ANSWERS CHECKED ON HOME INSPECTION LIST IN COLUMN 1**

**IN COLUMN 2, CHECK FOR STUDENT AWARENESS OF WHETHER THE ITEM IS A**

**HEAT SOURCE TO IGNITE A FIRE OR A POSSIBLE FUEL SOURCE**

**IN COLUMN 3, ACCEPT ALL REASONABLE ANSWERS**

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Teacher: Use with Lesson Three, Page 9. Duplicate for student use.

# Answer Key

Name \_\_\_\_\_

## Home Inspection Checklist

Investigation With Family Participation

This checklist was developed by the State Fire Marshal's Office.

*The goal is to have all items checked; however, evaluate on participation, not on number of items checked.*

- ❶ The first section, "Fire Hazards," is a room-by-room check for specific problems. The phrases tell what should be done to eliminate or reduce fire hazards.
- ❷ The second section, "Dangerous Actions," lists actions that can reduce your risk of fire.
- ❸ The third section, "Safety Measures," lists precaution to take now to reduce the damage from a fire should it occur.

Check off each item as you check your home.

**FIRE HAZARDS:** Check for fire hazards in your home. Correct any problems NOW.

### All Rooms

- Remove or replace any worn or frayed appliance or extension cords
- Store matches and lighters out of reach of children
- Remove plugs from overloaded outlets and extension cords

### Living Room, Family Room, Den, Bedrooms

- Use large ashtrays, and empty them frequently (after running under water)
- Keep the fireplace screened and cleaned regularly
- Do not put extension cords under rugs or carpets or looped over nails or other sharp objects that could cause them to fray
- Allow sufficient air space (at least one foot) around TV, stereo and other electronic equipment to avoid overheating
- Keep heating equipment at least three feet away from curtains, furniture and papers

### Kitchen

- Move any curtains or towel racks hanging close to the stove
- Store flammable liquids (cleaning fluids, contact adhesives, etc.) or aerosols away from the range or other heat source (*Remember, even a pilot light can set vapors on fire.*)
- Move any tempting or frequently used items stored above the range — where someone could get burned reaching for them, especially children in search of cookies or other goodies — to safer location

### Basement, Garage, Storage Areas

- Keep newspapers and other rubbish away from the furnace, water heater, or other heat source
- Store oily, greasy rags in labeled, sealed metal containers — Even better, clean or remove them
- Keep flammable liquids away from workbench or pilot light
- Store flammable liquids in labeled, sealed metal containers (This includes varnish, paint, paint remover, paint thinner, contact adhesives, cleaning fluids)
- Check that all fuses are the correct sizes

# Answer Key

**DANGEROUS ACTIONS:** Do you allow unsafe habits? These guidelines may help your family become more safety aware.

- Wear close-fitting sleeves while cooking (No loose sleeves, shirts, blouses or skirts that may catch fire easily.)
- Always watch cooking food — Never leave cooking unattended
- Never play with matches or lighters — Make sure children are not allowed to play with matches or lighters
- Never use gasoline to start a fire — and don't add lighter fluid to an already started fire
- Make sure no one smokes in bed, or when tired, drinking or under medication
- Spray aerosols a safe distance from a space heater, range or other ignition source — Don't spray aerosols while smoking
- Clean immediately after spilling flammable fluid on your hands or clothing — Never use a cigarette lighter
- Never reach over the stove or climb on the stove to get something stored above it

- Never lean against a range for warmth or stand too close to a heater or fireplace
- Run water over a match after blowing it out — Never let a small child blow out a match
- Use a flashlight to illuminate a dark area, such as a closet — Never use a lighted match, lighter or candle

**SAFETY MEASURES:** Do you have these safety items in your home?

- Working fire alarms (smoke detectors) on all levels and outside sleeping areas (each story or wing, basement, etc.)
  - Test the detector now and each month.
  - Change the batteries each year. (Change them now if you cannot remember when they were changed last.)
- ABC or ABCD fire extinguisher in the kitchen and/or workshop
- Emergency exit plan, with two ways out of each room and a meeting place outdoors
- Fire exit drill in the home every six months

**OTHER:** Did you notice any other fire hazards or habits? List them below.

Accept reasonable answers.

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Did your parents or other family members participate in this activity? Yes or no is acceptable; however encourage family participation.  
If yes, describe how you felt about their participation? \_\_\_\_\_

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Teacher: Use with Lesson Three, Page 9. Duplicate for student use.

Name \_\_\_\_\_

## Not Just Acting

## Answer Key

Observation Activity Sheets

After each scene, write your observations

1	home without a smoke alarm	way to be warned about a fire	suggested getting a smoke alarm
2	hearing a smoke alarm	to know a safe way out and to report a fire	had to crawl out under smoke, called 9-1-1
3	cooking pan catches fire	how to put the fire out	cover with a lid
4	first-degree burn	treatment for red burn on hand	run cool water over burn
5	second-degree burn	treatment for red, blistering burn	run cool water over burn, see doctor
6	clothes on fire and third-degree burn	how to put out clothing fire and treat third-degree burn	roll on the ground, and call 9-1-1
7	family needs help after fire	help for recovering from the fire, support for burn victim	referred to Red Cross, burn hospital, etc.
8	learning about fire safety	help for grandparents	suggested calling fire prevention office

★	<b>First Degree</b>	<b>Red</b>	<b>"Cool a burn" — Hold burn under running cool tap water</b>
★	<b>Second Degree</b>	<b>Red, blistering</b>	<b>"Cool a burn," then see a doctor if the burn is large or blisters are damaged</b>
★	<b>Third Degree</b>	<b>Gray, dry, no feeling</b>	<b>Call 911; don't remove clothing from burn area 2nd option — Go to Emergency Room immediately</b>

Teacher: Use with Lesson Four, Page 10. Duplicate for student use.



Name \_\_\_\_\_

## Helping Others

## Answer Key

Complex Problem-Solving Activity Sheet

Having a plan of action is important in dealing with any emergency. What is the most effective plan of action in each of the following situations? Write the answers to the questions on the lines.

<h3 style="color: purple;">Burns</h3> <p><b>Red</b></p> <p>?????? <del>cool a burn</del>          What do you do? <del>hold under cool, running water</del>          ??????</p> <p><b>Red and blistery</b></p> <p>?????? <del>cool with water, then see doctor</del>          What do you do first? _____          ??????</p> <p><b>Dry and gray</b></p> <p>?????? <del>Call 9-1-1, Don't remove clothing stuck to burn</del>          What do you do first? _____          ??????</p>	<h3 style="color: blue;">Smoke</h3> <p><del>While sleeping, you hear the smoke alarm</del></p> <p>??????          What do you do?          ??????</p> <p><del>You see smoke coming from a building</del></p> <p>??????          What do you do?          ??????</p> <p><b>Call 9-1-1</b></p> <p><del>Crawl under the smoke to the outside and go to your meeting place</del></p>
<h3 style="color: purple;">clothes On Fire</h3> <p><b>On Yourself</b></p> <p><b>Stop, Drop, Roll on the ground</b></p> <p><b>On Someone Else</b></p> <p>??????          What do you do first?          ??????</p> <p><del>Get them down on the ground and roll to put the fire out.</del></p>	<h3 style="color: blue;">Getting Help</h3> <p>to put out a fire          ??? Who do you call???</p> <p>to get help after a fire          ??? Who do you call???</p> <p>to provide treatment for burns          ??? Who do you call???</p> <p>to provide information on preventing fires          ??? Who do you call???</p> <p>to inspect buildings for fire hazards          ??? Who do you call???</p> <p>9-1-1 _____          Red Cross; local, state social service agencies _____          Hospitals with specialty burn units, Shriners hospitals _____          Your fire department's fire prevention office _____          Your fire department _____</p>

Teacher: Use with Lesson Four, Page 10. Duplicate for student use.

Name \_\_\_\_\_

# A Lifetime for Firesafety

★ Fire safety facts

★ Tips on reducing fires

★ Expanding your point of view

Teacher: Duplicate for use as cover to student booklet.



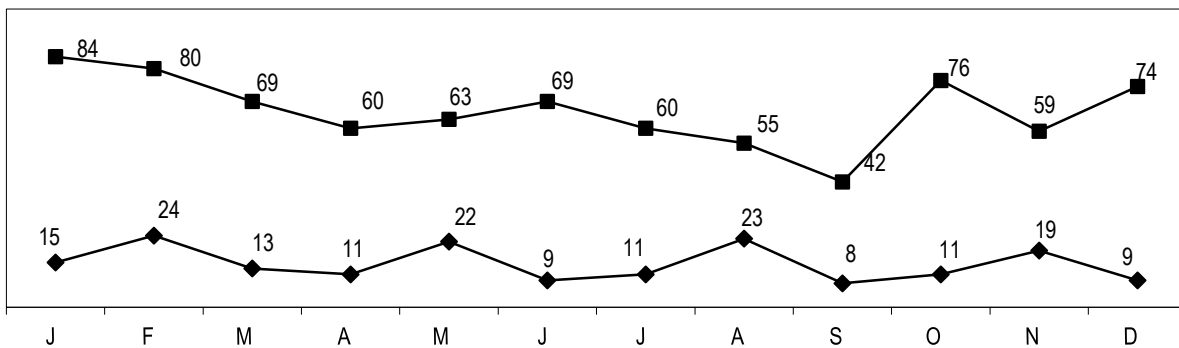
## Fires in Texas 2010

In 2010, Texas fire departments reported 76,781 fires thru the Texas Fire Incident Reporting System (TEXFIRS). As a result of these fires, 175 civilians lost their lives, 791 civilians were injured and \$510,113,505 in property loss was realized.

The data collected through TEXFIRS can help determine areas at risk and target effective fire prevention programs.

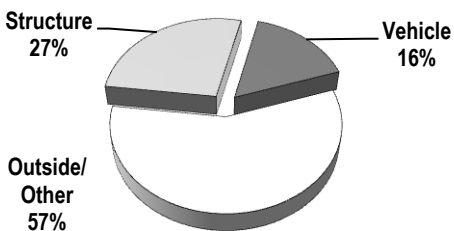
2010 Type of Fires	Total Fires	Civilian Injuries	Civilian Deaths	Dollar Loss
Structure fires	20,595	671	120	\$424,295,871
Vehicle fires	12,435	67	52	\$60,222,964
Natural & cultivated vegetation fires	22,058	16	2	\$18,714,470
Outside rubbish fires	16,568	8	0	\$437,003
Fires, other	2,854	10	1	\$3,559,447
Special outside fires	2,271	19	0	\$2,883,750
	<b>76,781</b>	<b>791</b>	<b>175</b>	<b>\$510,113,505</b>

Civilian Fire Injuries (■) and Deaths (◆) by Month



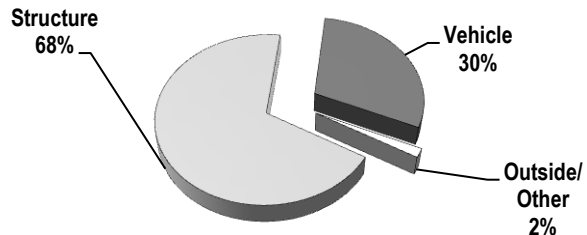
All Type of Fires

Structure	20,595	27%
Vehicle	12,435	16%
Outside/Other	43,751	57%
	<b>76,781</b>	



Fire Deaths by Type of Fire

Structure	120	68%
Vehicle	52	30%
Outside/Other	3	2%
	<b>175</b>	



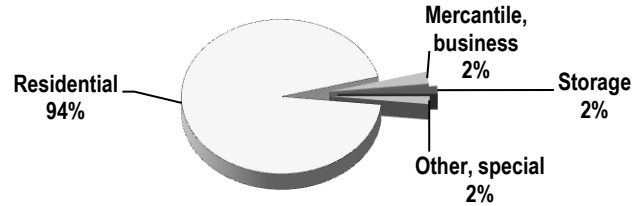
## Fires in Texas 2010

In 2010, there were 20,595 structure fires reported throughout the state. Seventy-nine percent (16,250) of those fires occurred on residential type property.

Residential structure fires resulted in 619 civilian injuries, 113 civilian deaths, 299 fire service injuries and an estimated \$284,528,457 in property loss.

### Fire Deaths by Type of Structure

Residential	113
Mercantile, business	3
Storage	2
Other, special	2
	<hr/>
	120

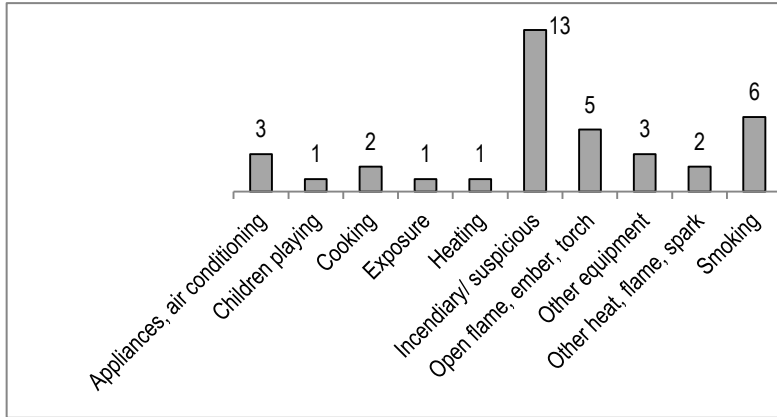


### Area of Fire Origin in Residential Structure Fires

Cooking area, kitchen	5,537	Common room, den, family or living room, lounge	504
Bedroom for less than 5 persons; included are jail or prison cupola	1,251	Wall surface: exterior	463
Laundry area	660	Undetermined	2,051
Vehicle storage area: garage, carport	529	All Other	4,745
	510		

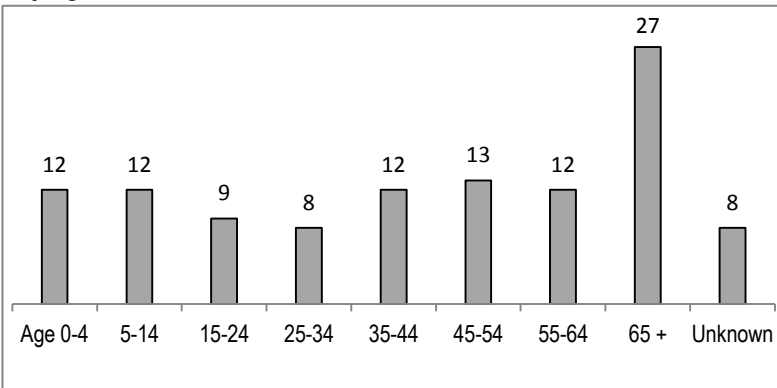
### Cause in Fatal Residential Structure Fires

Appliances, air conditioning	3
Children playing	1
Cooking	2
Exposure	1
Heating	1
Incendiary/ suspicious	13
Open flame, ember, torch	5
Other equipment	3
Other heat, flame, spark	2
Smoking	6



### Residential Structure Fire Civilian Deaths by Age

Age 0-4	12
5-14	12
15-24	9
25-34	8
35-44	12
45-54	13
55-64	12
65 +	27
Unknown	8



Name \_\_\_\_\_

## Analysis of "Fires In Texas 2010"

Data Analysis Activity Sheet

**Arson:** Officially called "incendiary" or "suspicious." Evidence proves the fire was intentionally set, or circumstances indicate the fire may have been set on purpose.

**Children playing:** The fire was caused by a child or children playing with matches, lighter or other type of heat source (such as, flame in a heater or hot heating element on a stove).

**Smoking:** The fire was the result of careless smoking. Examples: letting hot ashes of cigarette butts fall on furniture, not completely putting out a cigarette before putting in a trashcan, and smoking in bed.

**Heating:** The fire started with heating equipment, including central heating systems, local heating equipment (including portable heaters, wall heaters, fireplaces) and water heaters.

**Cooking:** The fire started with food or grease, usually left unattended in a pan or hot cooking appliance.

**Electrical distribution:** The fire started in electrical wiring, circuit boxes, switches or similar equipment within the structure itself. Does not include extension cords.

**Appliances, AC:** The fire started in an appliance, including central and room air conditioners. Includes kitchen equipment (unless food caught fire first), hair dryers and other personal appliances, and power tools.

**Open Flame, Torch:** The fire was caused by an open flame not associated with any other specified equipment. Most common: matches, lighters, welding and cutting torches.

**Other heat:** A source of heat not associated with any other specified equipment started the fire.

**Other equipment:** The fire was caused by equipment not specified in other groups. Most commonly includes industrial or special-use equipment.

**Natural:** The fire was caused by natural events, most commonly lightning.

**Exposure:** The fire started as a result of a nearby fire. Most commonly occurs in adjoining buildings.

**Unknown:** Based on available evidence, the cause of the fire cannot be determined .

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Using the graphs in "Fires In Texas, 2010," answer the following questions about fires in homes:

1. What caused the largest number of fires?  
\_\_\_\_\_  
About how many fires? \_\_\_\_\_
2. What known causes placed second and third in the number of fires in home? \_\_\_\_\_  
\_\_\_\_\_
3. What type of fire caused the largest number of death? \_\_\_\_\_  
About how many deaths? \_\_\_\_\_
4. What known causes placed second and third in the number of deaths? \_\_\_\_\_  
\_\_\_\_\_
5. What known fire causes placed first, second and third in the number of fire injuries?  
\_\_\_\_\_  
\_\_\_\_\_
6. What known fire causes placed first, second and third in the amount of dollar loss caused by fires? \_\_\_\_\_  
\_\_\_\_\_
7. Based on this information, what three types of fires do you think Texans should be concerned about? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. Do you think that fires will be reduced if everyone is more careful with fire hazards (things that can cause fires, such as cigarettes, heaters and cooking equipment)?  
\_\_\_\_\_  
Why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Teacher: Use with Lesson One, Page 7. Duplicate for student use.

Name \_\_\_\_\_

## Product Warning Labels

**DISINFECTANT**  
**SPRAY**


**ELIMINATES**  
**ODORS**

KILLS  
HOUSEHOLD  
GERMS,  
MOLD AND  
MILDEW

Polyurethane

**LIQUID  
PLASTIC**

**Super Glass**



**DANGER!**  
COMBUSTIBLE  
HARMFUL OR FATAL IF  
SWALLOWED. Read  
complete precautions on  
back panel.

HYPO-ALLERGENIC

**LIQUID  
HAIR SPRAY**

Extra hold  
USED BY PROFESSIONALS

**INTERIOR/EXTERIOR ENAMEL**

**SPRAY PAINT**

**DANGER: EXTREMELY FLAMMABLE, CAN PRESSURIZED.  
HARMFUL OR FATAL IF SWALLOWED, VAPOR HARMFUL.**

Read Caution Details on Back Panel Before Using.

**SPRAY  
STARCH**

- BODY WITHOUT STIFFNESS
- SPRAYS ON EVENLY
- EASIER AND FASTER

Teacher: Use with Lesson Two, Page 8. Duplicate for student use.

Name \_\_\_\_\_

## Product Warning Labels

Investigation Activity Sheet

Look around your home. What flammable products are kept there? What suggestions do you have for storing these items safely?

*Examples:*

Fancy Hair-do

Hair spray

Bathroom cabinet

None

Zip-Ease

Paint stripper

Cabinet under  
kitchen sink

Metal cabinet in  
storeroom

### Kitchen

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

### Bathroom

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

### Garage/Utility Room/ Store Room

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

### In Car/Truck

_____	_____	_____	_____
_____	_____	_____	_____

### Other

_____	_____	_____	_____
_____	_____	_____	_____

Teacher: Use with Lesson Two, Page 8. Duplicate for student use.





Name \_\_\_\_\_

## Home Inspection Checklist

Investigation With Family Participation

This checklist was developed by the State Fire Marshal's Office.

- 1 The first section, "Fire Hazards," is a room-by-room check for specific problems. The phrases tell what should be done to eliminate or reduce fire hazards.
- 2 The second section, "Dangerous Actions," lists actions that can reduce your risk of fire.
- 3 The third section, "Safety Measures," lists precaution to take now to reduce the damage from a fire should it occur.

Check off each item as you check your home.

**FIRE HAZARDS:** Check for fire hazards in your home. Correct any problems NOW.

### All Rooms

- Remove or replace any worn or frayed appliance or extension cords
- Store matches and lighters out of reach of children
- Remove plugs from overloaded outlets and extension cords

### Living Room, Family Room, Den, Bedrooms

- Use large ashtrays, and empty them frequently (after running under water)
- Keep the fireplace screened and cleaned regularly
- Do not put extension cords under rugs or carpets or looped over nails or other sharp objects that could cause them to fray
- Allow sufficient air space (at least one foot) around TV, stereo and other electronic equipment to avoid overheating
- Keep heating equipment at least three feet away from curtains, furniture and papers

### Kitchen

- Move any curtains or towel racks hanging close to the stove
- Store flammable liquids (cleaning fluids, contact adhesives, etc.) or aerosols away from the range or other heat source (*Remember, even a pilot light can set vapors on fire.*)
- Move any tempting or frequently used items stored above the range — where someone could get burned reaching for them, especially children in search of cookies or other goodies — to safer location

### Basement, Garage, Storage Areas

- Keep newspapers and other rubbish away from the furnace, water heater, or other heat source
- Store oily, greasy rags in labeled, sealed metal containers — Even better, clean or remove them
- Keep flammable liquids away from workbench or pilot light
- Store flammable liquids in labeled, sealed metal containers (This includes varnish, paint, paint remover, paint thinner, contact adhesives, cleaning fluids)
- Check that all fuses are the correct sizes

**DANGEROUS ACTIONS:** Do you allow unsafe habits? These guidelines may help your family become more safety aware.

- Wear close-fitting sleeves while cooking (No loose sleeves, shirts, blouses or skirts that may catch fire easily.)
- Always watch cooking food — Never leave cooking unattended
- Never play with matches or lighters — Make sure children are not allowed to play with matches or lighters
- Never use gasoline to start a fire — and don't add lighter fluid to an already started fire
- Make sure no one smokes in bed, or when tired, drinking or under medication
- Spray aerosols a safe distance from a space heater, range or other ignition source — Don't spray aerosols while smoking
- Clean immediately after spilling flammable fluid on your hands or clothing — Never use a cigarette lighter
- Never reach over the stove or climb on the stove to get something stored above it

- Never lean against a range for warmth or stand too close to a heater or fireplace
- Run water over a match after blowing it out — Never let a small child blow out a match
- Use a flashlight to illuminate a dark area, such as a closet — Never use a lighted match, lighter or candle

**SAFETY MEASURES:** Do you have these safety items in your home?

- Working fire alarms (smoke detectors) on all levels and outside sleeping areas (each story or wing, basement, etc.)
  - Test the detector now and each month.
  - Change the batteries each year. (Change them now if you cannot remember when they were changed last.)
- ABC or ABCD fire extinguisher in the kitchen and/or workshop
- Emergency exit plan, with two ways out of each room and a meeting place outdoors
- Fire exit drill in the home every six months

**OTHER:** Did you notice any other fire hazards or habits? List them below.

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Did your parents or other family members participate in this activity? \_\_\_\_\_

If yes, describe how you felt about their participation? \_\_\_\_\_

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Teacher: Use with Lesson Three, Page 9. Duplicate for student use.




Name \_\_\_\_\_

## Not Just Acting

Observation Activity Sheets

After each scene, write your observations

①		
②		
③		
④		
⑤		
⑥		
⑦		
⑧		

	<b>First Degree</b>	<b>Red</b>	<b>"Cool a burn" — Hold burn under running cool tap water</b>
	<b>Second Degree</b>	<b>Red, blistery</b>	<b>"Cool a burn," then see a doctor if the burn is large or blisters are damaged</b>
	<b>Third Degree</b>	<b>Gray, dry, no feeling</b>	<b>"Cool a burn," and call 9-1-1 (or local Emergency Medical Services) immediately</b> <b>2nd option — Go to Emergency Room immediately</b>

Teacher: Use with Lesson Four, Page 10. Duplicate for student use.

Name \_\_\_\_\_

## Helping Others

Complex Problem-Solving Activity Sheet

Having a plan of action is important in dealing with any emergency. What is the most effective plan of action in each of the following situations? Write the answers to the questions on the lines.

<h3>Burns</h3> <p><b>Red</b>      ?????? What do you do? ??????</p> <p>_____</p> <p>_____</p> <p><b>Red and blistery</b>      ?????? What do you do first? ??????</p> <p>_____</p> <p>_____</p> <p><b>Dry and gray</b>      ?????? What do you do first? ??????</p> <p>_____</p> <p>_____</p>	<h3>Smoke</h3> <p><i>While sleeping, you hear the smoke alarm</i></p> <p>?????? What do you do? ??????</p> <p><i>You see smoke coming from a building</i></p> <p>?????? What do you do? ??????</p> <p>_____</p> <p>_____</p>
<h3>clothes On Fire</h3> <p><b>On Yourself</b>      <b>On Someone Else</b></p> <p>?????? What do you do first? ??????</p> <p>_____</p> <p>_____</p>	<h3>Getting Help</h3> <p>to put out a fire    ??? Who do you call???</p> <p>_____</p> <p>to get help after a fire    ??? Who do you call???</p> <p>_____</p> <p>to provide treatment for burns    ??? Who do you call???</p> <p>_____</p> <p>to provide information on preventing fires    ??? Who do you call???</p> <p>_____</p> <p>to inspect buildings for fire hazards    ??? Who do you call???</p> <p>_____</p>

Teacher: Use with Lesson Four, Page 10. Duplicate for student use.

# Careless-Smoking Fires

Background Information

## Smoking Related Fires

During 2010, 6 people died in 439 residential fires related to smoking. Generally, a fire listed as a smoking related fire starts when someone, sometimes even the victim himself, did not dispose of cigarettes or matches properly.

### Smoking Related Fires In Living Rooms

One person died in a fire that started in living room. There were twelve fires that began in living rooms, probably caused by smoking. Among those fires, only seven homes had a working smoke detector.

The victims were:

- ♂ Males, none.
- ♀ Females, age 51.

### Smoking Related Fires In Bedrooms

Seven people died in 260 different fires that started in bedrooms. Common starting locations: bedding (sheets and blankets)

The victims were:

- ♂ Males, age 25 and 26.
- ♀ Females, age 59, 68, 81, 83 and 87.

Among the known causes of fatal fires in one- and two-family dwelling, smoking a leading cause of deaths. warning labels Arson and heating-related fires caused more deaths.

## Smoking Related Fires

## Cigarette Health Warnings

The U.S. Surgeon General's Office requires health warning labels on cigarette packages and in cigarette advertising. Here are examples of those.

SURGEON GENERAL'S WARNING:  
Quitting Smoking Now Greatly Reduces  
Serious Risks to Your Health

SURGEON GENERAL'S WARNING:  
Cigarette Smoke Contains  
Carbon Monoxide

SURGEON GENERAL'S WARNING: Smoking  
Causes Lung Cancer, Heart Disease,  
Emphysema, And May Complicate Pregnancy.

SURGEON GENERAL'S WARNING: Smoking  
By Pregnant Women May Result in Fetal Injury,  
Premature Birth, And Low Birth Weight.

Teacher: Use with Lesson Five, Page 11 Transfer to overhead transparency.

Name \_\_\_\_\_

## Public Service Announcements

### Background Information

**Public service announcements (PSAs)** are messages that promote a cause or provide information. Some PSAs appear in magazines and newspapers. Others appear on television and radio stations. You can recognize a PSA by the words "A public service of this station (or the publication)" or a similar phrase.



CHECK  
YOUR  
HOT  
SPOTS



With proper use, portable electric space heaters provide warmth and comfort. But space heaters need their space. They aren't drying racks or toasters! Keep anything combustible at least three feet from an electric space heater!

If you have questions, ask the fire department. Fire prevention is their mission. Make it yours too.

**WRONG EXIT**  
YOU COULD LEARN A LOT FROM A DUMMY. CLICK FOR DETAILS.



Remember, Only You can prevent a forest fire!



**NEED KNOWS NO SEASON**

Teacher: Use with Lesson Five, Page 11. Duplicate for student use.

