

# FIRE FIGHTER'S SAFETY GUIDE

FIGHTING FIRE  
WITH FOAM



FIRE PREVENTION WEEK: OCTOBER 4-10, 2015



Reproduced from the National Fire Protection Agency (NFPA) Fire Prevention Week website, [www.firepreventionweek.org](http://www.firepreventionweek.org). © 2013 NFPA.



## MESSAGE FROM THE HAWAII STATE FIRE COUNCIL (SFC)

Aloha! The SFC is pleased to announce the 30<sup>th</sup> edition of the Fire Fighter's Safety Guide (FFSG).

This year's FFSG promotes the 2015 Fire Prevention Week theme, "Hear the Beep Where You Sleep: Every Bedroom Needs a Working Smoke Alarm." According to the NFPA, to keep your family safe, a working smoke alarm must be installed in every bedroom. Did you know that roughly half of home fire deaths result from fires reported between 11 p.m. and 7 a.m. when most people are asleep? The key message of this year's Fire Prevention Week campaign is to install smoke alarms in every bedroom, outside each separate sleeping area, and on every level of your home, which includes the basement. This information is important so that everyone has a better understanding of the life-saving value of home smoke alarms.

The FFSG is distributed to elementary school students statewide through a collaboration of Hawaii's four county fire departments. This effort is unique to Hawaii and contributes toward our state having among the lowest rates of fire deaths and injuries in the nation.

The FFSG was designed with the whole family in mind. Please participate with your child(ren) and family by completing the activities and lessons together. This will help your family prepare for emergencies through prevention and planning. The completed activities should be returned to your child's teacher to receive valuable coupons.



*Manuel P. Neves*

**MANUEL P. NEVES**  
Chair  
Honolulu Fire Department  
Fire Chief



*Robert F. Westerman*

**ROBERT F. WESTERMAN**  
Vice Chair  
Kauai Fire Department  
Fire Chief



*Jeffrey A. Murray*

**JEFFREY A. MURRAY**  
Member  
Department of Fire  
and Public Safety  
County of Maui  
Fire Chief



*Darren J. Rosario*

**DARREN J. ROSARIO**  
Member  
Hawaii Fire Department  
Fire Chief



# PARENT'S PAGE

## SAFETY TIPS FOR YOUR HOME AND FAMILY



### WILDLAND FIRE SAFETY

- Clear leaves and other vegetation from roofs, gutters, porches, and decks.
- Remove dead vegetation and other items from under your deck or porch and within ten feet of the house.
- Wildland fires can spread to treetops. Prune trees so the lowest branches are six to ten feet from the ground.
- Do not store debris and lawn cuttings. Dispose of these items to reduce fuel for fire.



### KITCHEN SAFETY

- Cooking fires are the number one cause of home fires and injuries.
- Have a "kid-free zone" of **at least three feet** around the stove.
- Stay in the kitchen while you are cooking. If you leave the kitchen, turn off the stove.
- Keep items, such as oven mitts, wooden utensils, towels, etc., away from the stovetop, as they can catch on fire.
- Keep a lid nearby to smother small grease fires. Smother the fire by sliding the lid over the pan.
- For an oven fire, turn off the oven and keep the door closed.

### ELECTRICAL SAFETY

- Ensure electrical work is performed by a licensed electrician.
- Plug only one heat-producing appliance, such as a coffee maker, toaster, etc., into an outlet at a time.
- Extension cords are intended for temporary use only. Add more outlets to avoid using extension cords as permanent wiring.



### HOME FIRE SPRINKLERS

- When building a new home or remodeling, consider installing a home fire sprinkler system.
- Home fire sprinklers respond quickly and effectively to fire, often extinguishing the fire before the fire department arrives. Only the sprinkler closest to the fire will activate, spraying water on the fire.
- If a fire occurs, the risk of dying decreases by about 80% when the home has a fire sprinkler system.



For more Fire Safety Tips, visit  
the NFPA website at  
[www.nfpa.org/education](http://www.nfpa.org/education)

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# Hear the **BEEP** Where you **SLEEP**:



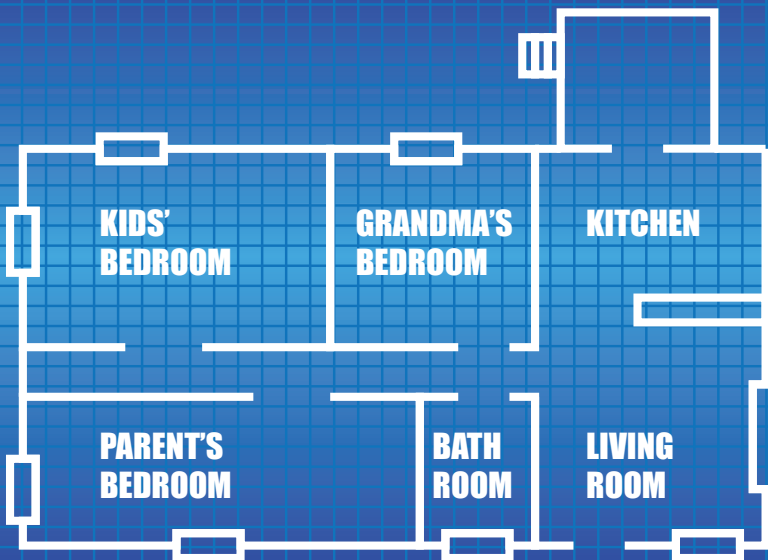
## Every Bedroom Needs a Working Smoke Alarm

Smoke alarms save lives. If there is a fire in your home, smoke spreads fast and working smoke alarms allow you time to escape. If you hear a smoke alarm, use your home escape plan to get out and stay out. If you don't have a home escape plan, create a plan on page 8.

Your home should have smoke alarms in every bedroom, outside each separate sleeping area, and on every level of your home, including the basement.

**Look at this house floor plan.** If you need to have a smoke alarm in every bedroom and the hallway outside of the bedrooms, how many smoke alarms would you need?

How many smoke alarms would **your** house need?





## SMOKE ALARM CHECKLIST

Time to do a smoke alarm checklist with your family. Ensure all the boxes below are checked. If some boxes are not checked, work together to prepare your family for emergencies.

- ☐ Ensure there is a working smoke alarm on every level/floor of your home.
- ☐ Ensure there is a working smoke alarm inside every bedroom.
- ☐ Ensure smoke alarms are tested at least once a month.
- ☐ Know the sound of your smoke alarm.
- ☐ Ensure your smoke alarms are less than ten years old. Change smoke alarms if they are more than ten years old.
- ☐ Ensure your family has a home fire escape plan.
- ☐ Ensure you know two ways out of every room.
- ☐ Ensure your plan contains an outside meeting place.
- ☐ Ensure your family has a fire drill at least twice a year.
- ☐ Ensure everyone at home knows how to call the fire department once they are outside.
- ☐ Ensure you get out and stay out once the smoke alarm sounds.

**STAY LOW and GO** →

If you see or smell smoke or hear a smoke alarm, STAY LOW AND GO! When you stay low to the ground and crawl, you can see and breathe easier.



If you hear a single beep or chirping sound coming from a smoke alarm, tell your parents. That sound means the battery must be changed.

# FIGHTING FIRE

## WITH FOAM



### The science behind a new method of fighting fires

**A** house is on fire and a fire truck rolls up to the scene ready for action. Fire fighters jump out and pull out their hose lines. The fire truck's engine roars as the hose lines are charged. The fire fighters open their nozzles and out shoots a white, bubbly foam that looks like melted ice cream. This is called compressed air foam system (CAFS).

#### WHAT IS CAFS?

CAFS is a system that uses mostly water, but adds foam concentrate, air, and agitation to create the finished foam.



# 4 PARTS TO MAKING CAFS



**1 WATER**  
Water is still the best cooling agent for fighting fires and the first step in making CAFS.



**2 FOAM CONCENTRATE**  
Similar to dish washing soap, foam concentrate is added to water to create a foam solution.



**3 AIR**  
Compressed air is added to the water and foam solution just before it reaches the hose.



**4 AGITATION**  
Water, foam solution, and air tumble in the hose to create finished foam.



## MAKING WATER BETTER

When added to water, foam concentrate breaks down the surface tension of water. This allows water to penetrate deeper into walls and furnishings. The addition of compressed air pushes the foam out of the hose, allowing it to travel farther than water alone. The air in the hose makes the hoses lighter and easier to move. Finished foam

clings to walls, ceilings, and creates a foam blanket that helps fire fighters extinguish fires more quickly and safely.

## ENVIRONMENTALLY FRIENDLY

CAFS reduces water usage, minimizing runoff and pollution to the environment. It also strips carbon particles out of smoke and reduces the carbon release into the atmosphere.



# MAKE A HOME ESCAPE PLAN

Use the grid below to draw a map of your home showing all the doors and windows. Use arrows to show your escape routes. Show at least **two ways out** of every room. Include a meeting place (like a tree, light pole, or mailbox) that is a safe distance from your home where everyone can meet.



Practice your escape plan at least twice a year by having a family fire drill. You can even have a drill at night so you know how to escape safely in the dark.



# GEAR UP

## A GUIDE TO WHAT FIRE FIGHTERS WEAR TO STAY SAFE

### HELMET

There is a reason for the helmet's unusual shape. The longer rear brim protects from cinders and falling objects and helps guide water away from the neck and back.

### HOOD

Protects the ears, neck, and parts of the face.

### Self-Contained Breathing Apparatus (SCBA)

The SCBA allows fire fighters to breathe clean air while fighting a fire. The mask protects the eyes and face.

### TURNOUT JACKET AND PANTS

Made of advanced materials, such as Nomex and Kevlar. Pockets of air between layers insulate against heat.

### GLOVES

Protects hands from heat, cold, cuts, and hazardous chemicals.

### BOOTS

Fire resistant and waterproof. Thick soles help prevent puncture injuries.

### DID YOU KNOW?

#### WOW THAT'S HOT!

Some specialized fire fighting suits can withstand temperatures of up to 2,000 degrees!

#### I'VE GAINED A FEW...

Fire fighting gear and equipment can add as much as 75 pounds to the person using it.



# DON'T STALL CALL 911

When there is an emergency, **DON'T STALL, CALL 911**, and give the operator your information. If there is a fire in your house, **DO NOT** call from your home. Get out and stay out! Go to your family's safe meeting place.

## WHO

Give the operator your first **AND** last name.

## WHAT

Explain what is wrong and what type of help you need.

## WHERE

Know your full address or location.



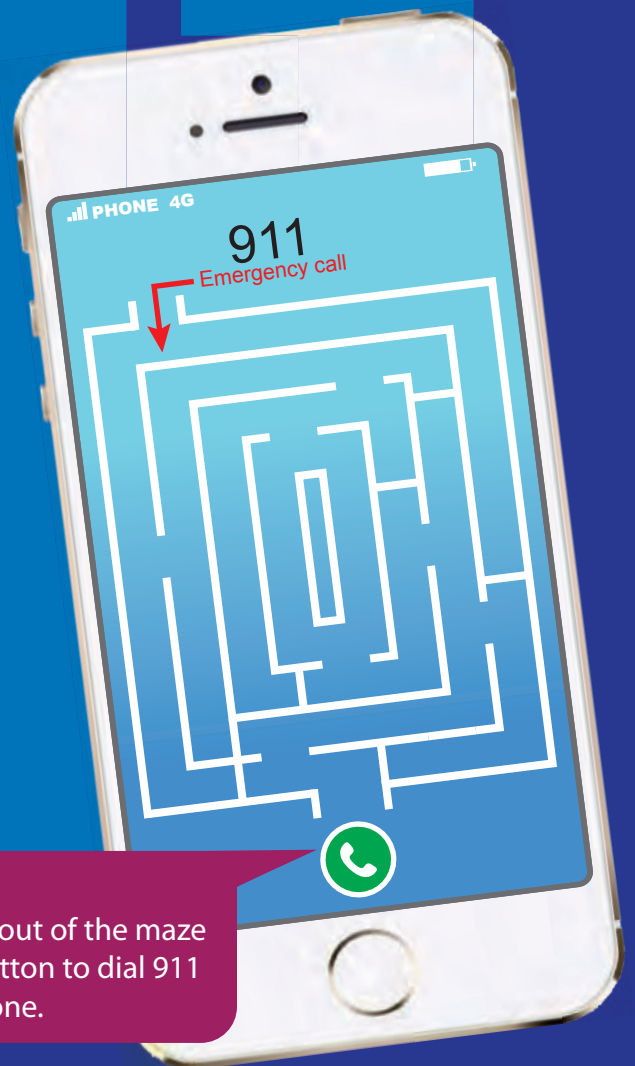
**911 should only be called for emergencies**

Put an "X" on the examples below where you **WOULD NOT** call 911.

- ☐ Your neighbor's house is on fire
- ☐ You want to practice calling 911
- ☐ There is a serious car accident.
- ☐ You want to call as a joke
- ☐ There is a stranger following you.
- ☐ Your dog is sick.
- ☐ Your cousin is choking.

### 911 MAZE

Find your way out of the maze to the "Call" button to dial 911 on the cell phone.



Write down your emergency information and put it somewhere easy to find (like on the refrigerator). Practice saying important information like your full name and home address.



# NEVER PLAY WITH

# FIRE

If you find matches, lighters, candles, or other items that can start a fire, tell an adult. Don't pick it up yourself! If you play with fire, you could burn down your house AND your neighbor's house, too. You could injure yourself, your friends, and your family.

If your clothes catch on fire, remember to **STOP**, **DROP**, and **ROLL**!



## DROP

to the ground and cover your eyes and mouth with your hands.

## ROLL

over and over and back and forth until the flames are out.

## WORD SEARCH

**FIND** the eight examples of flammable items you should never play with. Be sure to check up, down, diagonal, and backwards.

**CANDLE**  
**FIREWORKS**  
**GASOLINE**

**LIGHTER**  
**MATCHES**  
**OVEN**

**STOVE**  
**TOASTER**

C	Q	E	C	S	P	S	R	S	S
F	R	Y	N	D	S	E	V	T	E
C	S	K	O	I	T	L	M	O	H
M	A	V	E	H	L	I	S	V	C
P	E	N	G	P	X	O	O	E	T
N	N	I	D	S	H	O	S	E	A
X	L	E	N	L	U	C	D	A	M
S	K	R	O	W	E	R	I	F	G
N	P	O	T	O	A	S	T	E	R
F	D	J	N	U	D	O	U	Q	Y



## The Honolulu Fire Department's (HFD) mascot retires with 30 years of service

**F**ull of positive energy and always wearing a smile, a mascot's job is never done. Sometimes, even mascots need a break. With 30 years of service as the HFD mascot, Sparky the Fire Fly has decided it's time for his break.

"I've worked with Sparky for over 20 years," says Fire Captain David Jenkins, "and

he always found a way to brighten my day."

In August 1985, over 500 artists submitted designs in an islandwide search for the HFD's new mascot. After narrowing the entries to five finalists, Sparky won the job and was first featured in the 1986 Fire Fighter's Safety Guide. He went on to serve a full career with the HFD,

teaching fire safety to schoolchildren, marching in parades, and serving his community.

Sparky plans to travel the world, but says he will always be an ambassador for fire safety and education and will continue to keep the keiki of Hawaii close to his heart. He wishes the best of luck to the HFD's next mascot.

### SPARKY OVER THE YEARS



1986



1990



1997



2007





# Name THE NEW MASCOT

The HFD is proud to announce the appointment of its newest member. Our new mascot has pledged to uphold the HFD's motto of *Pride, Service, Dedication* and is prepared to share his knowledge of fire safety with families throughout Hawaii.

Please help us choose a name from the three choices below. Your family can vote for their choice when your parents complete the online survey.

## VOTE FOR YOUR CHOICE

<https://surveymonkey.com/r/firesafety2015>



**Akamai**

Smart, clever, expert



**Kinai**

To extinguish



**Poki**

The name of King Kamehameha's favorite dog

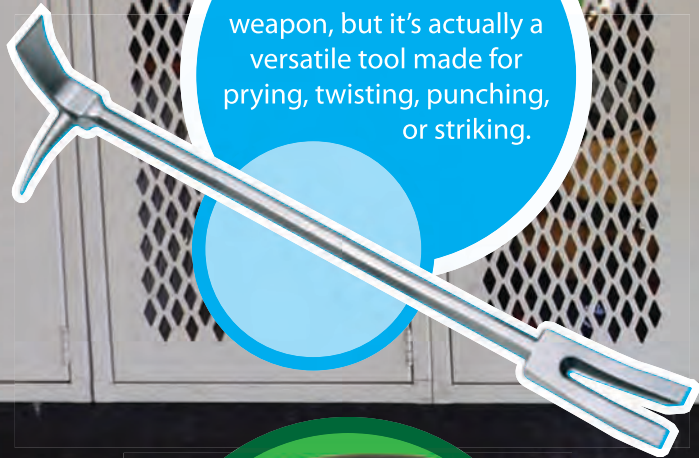


# COOL TOOLS

Fire fighters must be prepared for all types of emergencies. They are highly trained and use a variety of cool, specialized tools to help get the job done.



A spreader is a hydraulic tool designed with two arms that come together in a narrow tip and uses hydraulic pressure to separate or spread the arms. It is powerful enough to rip a car door off at the hinges and strong enough to lift a small bus off the ground.



The Halligan tool may look like a medieval weapon, but it's actually a versatile tool made for prying, twisting, punching, or striking.



A thermal imaging camera translates energy waves into a viewable image, which shows the "heat picture" of a scene. It allows fire fighters to see through smoke and in the dark.





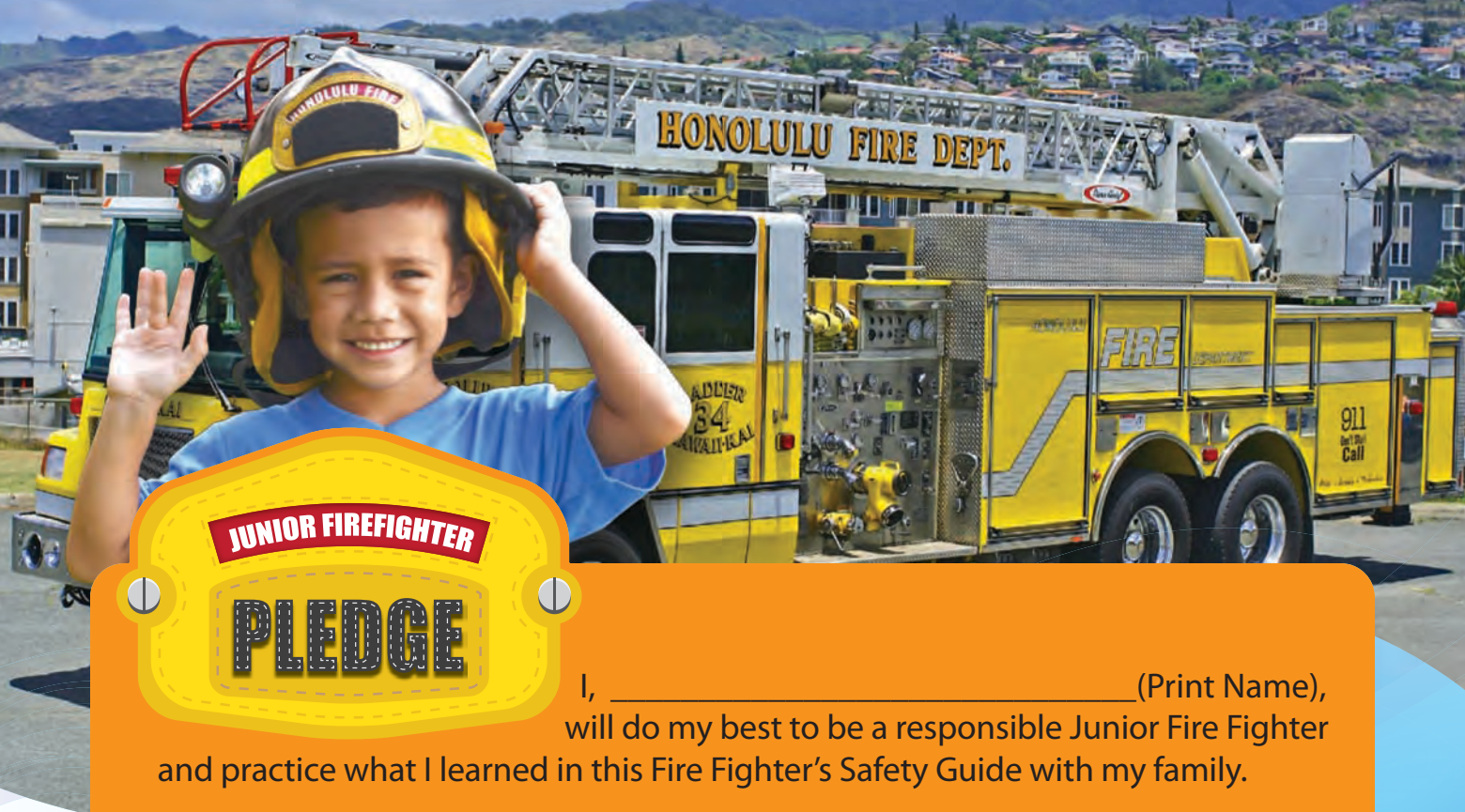
# FIRE SAFETY



**Time to test your knowledge. Circle the correct answer.**

1. **You should have a smoke alarm in:**
  - a. The kitchen.
  - b. The bathroom.
  - c. Each bedroom.
  - d. All of the above.
2. **If you see or smell smoke, you should:**
  - a. Run quickly to get out.
  - b. Go back to sleep.
  - c. Find out where it's coming from.
  - d. Stay low and go.
3. **The acronym CAFS stands for:**
  - a. Cool And Foamy Soap.
  - b. Candy Apple Flavored Soup.
  - c. Constant Area Foam Shooter.
  - d. Compressed Air Foam System.
4. **You should know at least this many ways out of every room in your home:**
  - a. One
  - b. Two
  - c. Three
  - d. Four
5. **If you hear a chirping sound coming from a smoke alarm, it means that:**
  - a. The smoke alarm has a bird inside.
  - b. The smoke alarm is working.
  - c. The smoke alarm is broken.
  - d. The smoke alarm's battery must be changed.
6. **Practice your family fire drill:**
  - a. At night.
  - b. During the day.
  - c. In the morning.
  - d. During the day and at night.
7. **You should call 911 if:**
  - a. You are hungry.
  - b. You want to play a joke on someone.
  - c. You have a bad dream.
  - d. None of the above
8. **If you find a lighter, you should:**
  - a. Pick it up.
  - b. Throw it away.
  - c. Tell an adult.
  - d. Call 911.
9. **When you stop, drop, and roll, you should cover your:**
  - a. Eyes.
  - b. Mouth.
  - c. Stomach.
  - d. Both a. and b.
10. **The coupons in this guide are a reward for:**
  - a. Being a great kid.
  - b. Going to school.
  - c. Listening to your teacher.
  - d. Completing the Fire Fighter's Safety Guide with your family.

Answers: 1.c, 2.d, 3.d, 4.b, 5.d, 6.d, 7.d, 8.c, 9.d, 10.d



### JUNIOR FIREFIGHTER

## PLEDGE

I, \_\_\_\_\_ (Print Name),  
will do my best to be a responsible Junior Fire Fighter  
and practice what I learned in this Fire Fighter's Safety Guide with my family.

\_\_\_\_\_  
Junior Fire Fighter's Signature



## PARENT CHECKLIST

- ☐ I reviewed this Fire Fighter's Safety Guide with my child.
- ☐ We completed all activities in the guide as a family.
- ☐ I completed the online survey at <https://surveymonkey.com/r/firesafety2015>



## MAHALO TO OUR PARTNERS

Bay View Mini-Putt and Zipline  
Big City Diner  
Bernice Pauahi Bishop Museum  
Dole Plantation, Inc.  
Gunstock Ranch  
Jack In the Box® Hawaii  
Kualoa Ranch  
McDonald's® Restaurants of Hawaii

Menchie's Hawaii LLC  
Pizza Hut®, TD Food Group, Inc.  
Polynesian Cultural Center  
7-Eleven® Hawaii, Inc.  
Tanaka Saimin  
The Honolulu Zoo  
Waikiki Aquarium  
Waikiki Beach Marriott Resort & Spa