

Fire Safety Lesson Plans for Grades PreK-8

Prevention1st.org
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We’d like your feedback! Let us know how you’ve used a lesson plan, your students’ reactions, your comments and suggestions:

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ACTIVITIES BY TOPIC AND GRADE LEVEL RANGE

	Fire Prevention	Emergency Preparedness	Escaping a Fire	The Science of Fire and Smoke
Pre-K - Grade 2	How Do We Use Fire? Safe for Play! Keep Away! Mikey Makes a Mess	How Do We Use Fire?	Help Mikey Make It Out Calling 911 Go to the Firefighter Get Low and Go Stop! Drop! and Roll!	How Do We Use fire? Safe for Play! Keep Away!
Grades 3-5	What to Do When the Alarm Goes Off Home Hazards Kitchen Safety Microwave Safety Mikey Makes a Mess Firefighting as a Career	Fire Prevention Is Everyone's Job Which Way Is Out? Search and Rescue	Calling 911 Home Hazards Get Low and Go	Microwave Safety
Grades 6-8	What to Do When the Alarm Goes Off Science 1 - What burns and how Science 4 - Fire Prevention Common Causes of Home Fires Microwave Safety For Spanish classes: Mikey Makes a Mess available in Spanish For babysitting: Kitchen Safety Firefighting as a Career	Science 2 - Smoke Science 3 - Flammability	Science 1 - What burns and how Science 2 - Smoke Science 3 - Flammability	Science 1 - What burns and how Science 2 - Smoke Science 4 - Fire Prevention

HOW DO WE USE FIRE?

Grade level: PreK-5
Suggested Time: 20 minutes

Overview

Our homes have many sources of flame and heat. Children need to know which things are safe for them to use and which are tools for adults only.

Objective

Children and their parents are made more aware of the sources of fire and heat, and reminded of key safety practices and the message that these are adult tools.

Resources/Props/Preparation

- Worksheets following this lesson plan, scissors, pencil

The Lesson

Note: Select from below the questions most appropriate for the age of the children

1. Have students cut out the sorting labels and the 16 pictures of sources of fire/heat.
2. Explain to students that they are going to sort the pictures into categories, and that it is okay if their answers are different, and that some pictures may not fit perfectly into a category.
3. Have students first sort the pictures by "Electricity" vs. "Fire." Ask questions like:
 - How would electricity lead to a fire?
 - Which is more dangerous?
 - Do you have more examples of electricity or fire in your home?
 - Have students compare sorts and discuss differences.
 - Are there any examples that don't fit into either category? What could another category be?
4. Have students then sort the pictures by "I can use with help" vs. "Adults Only." Ask questions like:
 - What sources of heat are you allowed to use at home?
 - What are the safety rules for using those sources of heat?
 - How would the sort change as you get older?
 - Have students compare sorts and discuss differences.
 - Are there any examples that don't fit into either category? What could another category be?
5. Have students sort by the locations of the heat sources in their house. Ask questions like:
 - What room has the most sources of fire or heat?
 - What room do you think most fires start in?
 - Have students compare sorts and discuss differences.
 - Are there any examples that don't fit into either category? What could another category be?
6. Have students match the source of heat/fire with the correct safety tip.

Answers: candle (h), stove (l), microwave (b), campfire (e), clothes dryer (k), matches/lighter (c), fireplace (g), hair dryer (j), oven (m), iron (a), tea kettle (f), toaster (i), lightbulb (d)

Electricity

Fire

**I can use
with help**

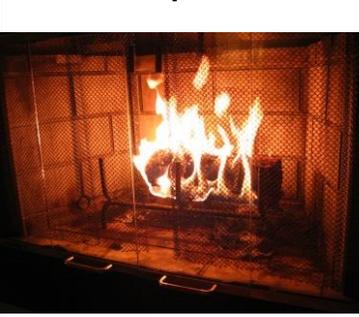
**Dangerous!
Adults only!**

Kitchen

Bathroom

Bedroom

Other Place

<p>Candle</p> 	<p>Stove</p> 	<p>Microwave</p> 	<p>Campfire</p> 
<p>Cigarette</p> 	<p>Clothes Dryer</p> 	<p>Dishwasher</p> 	<p>Matches</p> 
<p>Lighter</p> 	<p>Fireplace</p> 	<p>Hair Dryer</p> 	<p>Oven</p> 
<p>Iron</p> 	<p>Tea Kettle</p> 	<p>Toaster</p> 	<p>Lightbulb</p> 

Match the source of heat or fire with the correct safety tip to prevent fires or burns!

- | | |
|-----------------------|--|
| _____ candle | a. make sure the cord isn't cracked or damaged |
| _____ stove | b. never put metal in it |
| _____ microwave | c. don't use - get adult help! |
| _____ campfire | d. never put a blanket or clothing over it |
| _____ clothes dryer | e. keep a bucket of water next to it |
| _____ matches/lighter | f. don't hold the mug as you pour |
| _____ fireplace | g. clean the chimney once every year |
| _____ hair dryer | h. always blow it out before you leave the room |
| _____ oven | i. never stick a knife in it to get the food out |
| _____ iron | j. don't use near a sink or bathtub |
| _____ tea kettle | k. clean the lint trap after every load |
| _____ toaster | l. never leave the kitchen unattended if this is on |
| _____ lightbulb | m. don't put dish towels or pot holders in the drawer underneath |

SAFE FOR PLAY! KEEP AWAY!

(Excerpted from the BIC [play safe! be safe!](#)® program)

Grade Level: PreK – 2

Suggested Time: 20 minutes

Overview

Children need to understand that there is a difference between adult tools and children’s toys, and to be able to identify matches and lighters as adult tools.

Objectives

Children will be able to:

- Say “Keep Away!” when asked what to do if he or she finds matches or a lighter.
- Say that he or she will tell a grownup to put them away if he or she finds matches or a lighter.
- Identify items as “safe for play” or “keep away” objects.

Resources/Props/Preparation

- [“Safe for Play/Keep Away”](#) activity at [playsafebesafe.com](#), or Lesson 4 of the *play safe! be safe!* classroom kit.
- [Safe for Play Storybook](#) at [playsafebesafe.com](#).

The Lesson

- From the above resources, as they view each item invite the children to say something about each object, and what it is used for.
- Have the students categorize the items into groups
- Have the students choose ‘Keep Away’ or ‘Safe for Play’.

Additional Material

- The [play safe! be safe! classroom kit](#) includes additional activities and a family letter to send home with children about this lesson. The kit also includes the Keep Away!/¡Aléjate! card game by Fireproof Children, which helps children develop visual memory skills while learning that matches and lighters are for adults only.

Teacher Comments:

“The students really liked this!”

GO TO THE FIREFIGHTER

(Excerpted from the BIC [play safe! be safe!](#)® program)

Grade Level: PreK - 1
Suggested Time: 20 minutes

Overview

Children can become frightened by a firefighter's equipment and may hide in a rescue situation. This activity helps children understand that the firefighter is a community helper in special clothes who can help if there is a fire, and recognize the difference between the firefighter and his or her equipment.

Objectives

Students will be able to:

- Get the firefighter ready to fight a fire through the Dress the Firefighter activity.
- Articulate “go to the firefighter” as the correct action to take if he or she is ever in a fire.
- Articulate that the firefighter is “a friend who helps us.”

Resources/Props/Preparation

- “[Dress the Firefighter](#)” activity at [playsafebesafe.com](#).
- [Firefighter Storybook](#) at [playsafebesafe.com](#)
- Or, if using the *play safe! be safe!* classroom kit, the “My friend the firefighter” activity board and vinyl stickers.

The Lesson

- Ask the students what a firefighter looks like and how firefighters can help people.
- Give the children the opportunity to get the firefighter ready to fight a fire using the online Dress the Firefighter activity.
- Teach children the purpose of each piece of the firefighter's turnout suit, such as :
 - Helmet protects the head in case something falls from overhead.
 - Flame-retardant coats, boots, gloves protect the firefighter.
 - Air tank and face mask help with breathing where there is smoke.
 - Flashlight helps the firefighter see when it's dark.

Additional Material

- The [play safe! be safe! classroom kit](#) includes additional activities including story cards with questions, and a family letter to send home with children about this lesson.
- Video #21 The Gear They Wear at the NFPA's [Sparky.org](#) (Appropriate for K-2).

FIRE PREVENTION IS EVERYONE'S JOB

Grade Level: 3-5

Suggested Time: 20 minutes

Overview

Fire prevention is everyone's job. Children need to understand the importance of fire prevention and learn ways they can keep themselves and their families safe.

Objectives

Students will be able to:

- Understand that fire prevention is the responsibility of both communities and individuals.
- List at least 3 actions that can be taken at the community (city/town and school) level and individual (home) level that reduce the risk of injury from a fire.

Resources/Props/Preparation

Video #2 *Lessons from History: The Chicago Fire of 1871* (length 7:10) at NFPA Sparky.org

The Lesson

- Show the video *Lessons from History: The Chicago Fire of 1871* or have students watch on their own and take notes.
- Ask students to list the specific factors that caused the Chicago fire to grow out of control (recent drought, many wooden buildings, the weather was hot and windy, other recent fires left the firefighters exhausted, fire equipment was not as effective in 1871 as it is today)
- Discuss what was learned from the Chicago fire. What happened after the fire to keep future fires from spreading so fast and becoming so large (use of fire resistant building materials, planning cities with wider roads to stop fires from spreading)?
- Brainstorm as a class or in small groups, actions that can be taken at the community level to prevent fire related injuries (having fire departments, fire hydrants, pulling over for emergency vehicles, mandatory fire drills, fire alarms in schools and public buildings that everyone can access).
- Brainstorm as a class or in small groups, actions that can be taken at the individual level. Ask students what they can do to keep themselves and their families safe at home (smoke alarms on every level, test alarms to ensure they function, plan and practice an exit drill with a clear meeting place, keep exits and pathways clear and free of clutter, understand some tools are for adults only i.e. matches and lighters).
- Ask students to list the actions they feel are most important and have them take the list home to their families.

Additional Material

- [I Survived the Great Chicago Fire, 1871](#) by Lauren Tarshis
- [Home Fire Safety Checklist](#) from [Prevention 1st Safety Resources](#)

GET LOW AND GO

(Excerpted from the BIC [play safe! be safe!](#)® program)

Grade Level: PreK-5

Suggested Time: 20 minutes

Overview

Children need to understand that fire isn't the only thing that can harm them in a fire situation, and that when a smoke alarm beeps, there is danger and he or she should get outside right away to fresh air.

Objectives

Students will be able to:

1. Say that the sound of a smoke alarm means "get outside now."
2. Respond "get low and go" when asked what to do if ever in a room with smoke.
3. Be able to demonstrate how to get low and go.

Resources/Props/Preparation

- Smoke alarm with test button
- Lesson 3 of the play safe be safe DVD, or:
- NFPA Video: [Get Low and Go](#) (30 seconds)
- Music

The Lesson

- Show students the brief "smoke" segment included in the DVD just after the 'Get low and go' title sequence.
- After viewing this, invite students to talk about smoke. Ask them where they have seen smoke and what kinds of things can make smoke. Encourage them to tell about the qualities of smoke. What are the colors of smoke? What does smoke smell like? Can smoke be big? Can it be small?
- Show the students a smoke alarm and let them hear the sound the alarm makes when there is smoke.
- Have the children march to the music in a circle or zigzag around the room. As soon as the smoke alarm beeps, have everyone in the room get on their hands and knees and crawl low to the exit.
- Remind students to hold their heads up above the floor (about 18" from the floor) and always look where they are going.
- Be sure there is a caretaker at the exit to supervise the student and praise them for reaching the outside.
- Do this several times so they can practice the correct response to a smoke alarm from more than one place in the room.
- Remind them that "get low" is to be used **only** when they are in a room with smoke.

Additional Material

- The [play safe! be safe! classroom kit](#) includes additional activities including story cards with questions, and a family letter to send home with children about this lesson.
- Online [play safe! be safe! storybooks](#) reinforce this and other lessons.

STOP! DROP! AND ROLL!

Grade Level: PreK - 2
Suggested Time: 20 minutes

Overview

One of the ways children can be hurt by fire is not knowing what to do if their clothes catch on fire.

Objective

Students learn the correct way to stop! drop! and roll!, a life-saving fire safety response to be used only if there is fire on some part of their clothing.

Resources/Props/Preparation

- [Stop! Drop! and Roll! Storybook](#) at playsafebesafe.com, or Lesson 2 in the play safe! be safe! classroom kit.
- Video #19 Stop! Drop! and Roll for ages 3-5 and perhaps 6-8; from NFPA [Sparky.org](#)

The Lesson

- Show students the online storybook [Stop! Drop And Roll!](#)
- Go over what to do If fire gets on your clothes:
 - Stop exactly where you are.
 - Drop to the ground and lie flat, covering your face with your hands.
 - Roll from one side to the other until all the fire is out.
- Invite them to practice Stop! Drop! And Roll!, making sure they follow the steps shown in the storybook.
- Remind them to always cover their faces with their hands, to keep rolling from one side to the other until all the fire is out, and to roll slowly to squash the fire.
- Stress that stop! Drop! And roll! Is to be used only if fire “gets on” their clothes.

Additional Material

- The [play safe! be safe! classroom kit](#) includes additional activities including story cards with questions, and a family letter to send home with children about this lesson.
- Online [play safe! be safe! storybooks](#) include this and other lessons.

HELP MIKEY MAKE IT OUT

Grade Level: PreK-2
Suggested Time: 15 minutes

Overview

Help Mikey Make It Out is an interactive online game that teaches children what to do, and what not to, when the smoke alarm sounds.

Objectives

By helping Mikey escape, students learn to:

- Check the door before going out into the hallway
- Not go out if there is smoke in the hallway
- Get low and go
- Get out and *stay* out.
- Go to a family meeting place.

Resources/Props/Preparation

[Help Mikey Make It Out](#) online game at homefiredrill.org.

The Lesson

- Have one student be the player while the class helps choose the next action at each of Mikey's decisions. Older students can play the game on their own.
- Have the students role play different scenarios.
- The game can be played over and over, because just like in real life, different things may happen. The door may be cool or hot, there may or may not be smoke in the hallway.

Additional Material

- Homefiredrill.org has resources for families to plan and practice their own escape route.
- Video #10 Get Outside and Stay Outside (Fire Safety Songs for Kids) at NFPA Sparky.org.

MIKEY MAKES A MESS

Grade Level: PreK – 2; 3 – 5 if the children read it themselves online
6-8 for Spanish classes

Suggested Time:

Overview

The children's storybook *Mikey Makes a Mess* is in English and Spanish. The online version can be read with or without narration in English or Spanish. The story is about Mikey, a little boy who likes to leave his things exactly where he wants them—in the middle of the floor. His parents aren't too pleased. But then Mikey's daddy leaves out something he shouldn't—a book of matches. Both learn there are some things that shouldn't be left lying around.

Objectives

Student learn:

- Matches and lighters are tools for adults only.
- What to do if you find matches or a lighter
- Pick up clutter to keep pathways clear.

Resources/Props/Preparation

Mikey Makes a Mess is available in print or [online](#) at prevention1st.org

The Lesson

Read the book to the class, or have them read it. Ask:

- What did Mikey find?
- What did Mikey's dad learn?
- What should you do if you find matches or lighters?

Additional Material

- The book includes additional questions for children, and extra safety information for parents.
- Mikey also plays a starring role in the online game [Help Mikey Make It Out](#), which teaches safe exiting if there is smoke or fire.

WHAT TO DO WHEN THE ALARM GOES OFF

Grade Level: 3- 5; 6-8

Suggested Time: 30 minutes

Overview

A working smoke alarm (and CO detector) can save lives, but everyone needs to know what to do when it sounds. This skit encourages students to think about and practice all of the 'next steps' after an alarm goes off.

Objectives

Students learn to respond immediately and appropriately when the alarm sounds:

- 'Get low and go'.
- If you are in a room with the door closed, check the door for heat.
- If the door is hot, stay in the room with the door closed, go to the window and wave
- If the door is cool, follow your exit plan, using a 2nd or alternative exit if the primary exit is blocked
- Go to your meeting place – one that is away from and in front of the house where everyone in your family can meet, like a tree or mailbox.

Resources/Props/Preparation

- Smoke alarm with test button (alternatively, a student may act as a smoke alarm)
- Nearby door
- Sign: Meeting Place

The Lesson

- Students create a skit in which they are home at night and the smoke alarm goes off.
- Have someone press the test button on the smoke alarm to make it sound.
- Students role play how to:
 - Get out of bed and get low under smoke.
 - Check the door with the back of the hand to make sure it's not hot.
 - If the door is hot, stay in the room with the door closed, go to the window and wave
 - If the door is cool, open the door slowly and peek out to see if there is smoke.
 - If there is smoke, close the door, cover the crack and go to the window. Wave, drape a sheet out the window, if you have a phone call 911 and tell them where you are.
 - If there is no smoke, go quickly to the meeting place. Use an alternative exit plan if the primary is blocked.
- Remind them that everyone should stay at the meeting place until help arrives. Never go back inside for anyone or anything. Discuss the importance of the meeting place location; a specific location near street that everyone in your home knows about and near where emergency responders will arrive.
- Ask students what information would be important to share with firefighters (emergency responders) : Is everyone who was in the home accounted for at the meeting place? If not, where were they last known to be? Where in the house is the fire (ex; top of the stairs first bedroom on the left; smoke coming from basement)?

Additional Material

Carbon monoxide alarms are just as important as smoke alarms. A carbon monoxide alarm is constantly sniffing the air for carbon monoxide-- a gas we cannot see or smell but can make us very sick.

Often called the invisible killer, carbon monoxide is an odorless, colorless gas created when fuels (such as gasoline, wood, coal, natural gas, propane, oil, and methane) burn incompletely. In the home, heating and cooking equipment that burn fuel are potential sources of carbon monoxide. Vehicles or generators running in an attached garage can also produce dangerous levels of carbon monoxide.

- The dangers of CO exposure depend on a number of variables, including the victim's health and activity level. Infants, pregnant women, and people with physical conditions that limit their body's ability to use oxygen (i.e. emphysema, asthma, heart disease) can be more severely affected by lower concentrations of CO than healthy adults would be.
- A person can be poisoned by a small amount of CO over a longer period of time or by a large amount of CO over a shorter amount of time.
- In 2010, U.S. fire departments responded to an estimated 80,100 non-fire CO incidents in which carbon monoxide was found, or an average of nine such calls per hour. The number of incidents increased 96 percent from 40,900 incidents reported in 2003. This increase is most likely due to the increased use of CO detectors, which alert people to the presence of CO.

Ask students: ***What do we do when we hear the sound of a CO alarm?***

Answer: The same thing we do when we hear a smoke alarm. We leave right away, following our exit plan. We meet at our meeting place and call 911.

<http://homefiredrill.org/?p=know-what-to-do-video>

Watch the above 7 minute video of 2 families each conducting their home drill. Ask students to identify the things each family did wrong. (Miles: Did not get low, did not check door before going out; Miranda: Went back for dog, does not go directly to meeting place; Joey: Does not wake up at all)

What would help them improve their ability to escape in an emergency?

(How does anyone become better at any activity or sport?) Why was going through the training at school not enough for Miles? (He didn't **Practice!! And treat every alarm as if it were real!**)

<http://www.sparky.org/videos> # 23 Great Escape

HOME HAZARDS

Grade Level: 3-6

Suggested Time: 30 minutes

Overview

This lesson engages students in learning about the dangers of clutter and other home hazards. They will learn to keep pathways clear so that everyone can exit safely in the event of an emergency.

Objective

Students learn that picking up their things is part of keeping their families safe by keeping hallways and doorways clear of clutter in case they need to get out in a fire.

Resources/Props/Preparation

- Use a nearby door
- Smoke alarm
- Collect a variety of items to show that it is important for children AND parents to put things away: backpack, shoes, toys, piles of paper, etc.

The Lesson

Have the students create a brief skit. Choose 2 students to role play parents. The rest of the group will play the children. Present the students with the following and then give them fifteen minutes to create a script:

- The students pretend to come home from school and leave their stuff (backpack, shoes, toys) in front of the door.
- Smoke alarm goes off

Discuss the following:

- What happens when the children try to get out quickly?
- What can we do everyday to make sure the halls and doorways are free of clutter?

Additional Material

- [Home Fire Safety Checklist](#) from [Prevention 1st Safety Resources](#)

Teacher Comments:

“In the future, I would probably model a skit or show an image or video before asking the children to write their own skits.” “Remind the students to be realistic.”

“The students were very excited with this activity!”

KITCHEN SAFETY

Grade Level: 3-5; 6-8 (for babysitting younger children)

Suggested Time: 30 minutes

Overview

More fires start in the kitchen than in any other room. The oven is relatively safe since it is closed when we cook. But we must know how long to cook the food and then set a timer to remind us. If a fire starts in the oven because something spills, turn off the oven and leave the oven door closed. Cooktops get very hot, cook food fast, and are open. They are the leading source of cooking fires, especially when frying.

Objectives

Students will be able to identify hazards in the kitchen, e.g. grease on the stove, paper near the stove, loose sleeves.

Resources/Props/Preparation

- Kitchen objects and pictures of objects that reflect common hazards: plastic spoon, toaster, wooden spoon, towel, pot.
- Shirt with loose sleeves
- Chef's hat optional.

The Lesson

- Set up a "kitchen" with common household objects and pictures of objects arranged to show common hazards: plastic spoon on a toaster, wooden spoon and towel next to a burner, pot handle sticking out.
- Teacher or a student dresses like a chef with baggy sleeves to show the danger of cooking with loose fitting garments.
- Ask students to file through the "kitchen," keeping quiet about what they see
- After everyone has looked, ask students to identify a fire hazard they saw.
- Review why these things are hazards:
 - If something spills, it can catch fire. If we cook on too high a heat, or for too long, food can catch fire. If papers (like recipes), clothing (loose sleeves), or oven mitts get too close to the burner they too can burn.
- Review what to do to prevent these hazards:
 - Keep anything that can burn away from the cooktop
 - Wear tight or short sleeves.
 - Clean off grease (which can catch fire).
 - Don't leave the kitchen when cooking with the cooktop.

Additional Material

- [Home Fire Safety Checklist](#) from Prevention 1st [Safety Resources](#)
- NFPA Tip Sheets on [Cooking and Microwaving](#)
- See also the lesson [Microwave Safety](#)
- Kitchen picture and answer sheet from [Science 4-Fire Prevention lesson plan](#)

CALLING 911

Grade Level: K-2, 3-5
Suggested Time: 20 minutes

Overview

When calling 911 to get help, it's important to understand what we need to tell the 911 operator.

Objective

Students learn the right way to call 911 if they have an emergency

Resources/Props/Preparation

Children or small groups can make the large message cards to hold up:

- My name
- My house number and street
- My town
- My phone number
- My cross street
- What is the emergency

The Lesson

- Ask the class "What is an emergency?" and discuss examples.
- Choose one student to pretend to call 911 with an emergency, and another to play a 911 operator.
- The rest of the group holds up the 911 message cards one at a time so the 911 operator knows what questions to ask the person calling 911. The 911 operator will need to know:
 - What kind of emergency is happening
 - Your name
 - Address (house number, street, and town)
 - Nearest cross street
 - Your phone number (not all cell phones will display)
- Remind them it is important to **stay on the phone** with the operator and not hang up even after you have given all your information. If your directions are not clear or perhaps incorrect, the 911 operator can still find you if you stay on the line, and can ask for more information if needed.

Additional Material

- [911: What you need to tell the 911 operator](#) from [Prevention 1st Safety Resources](#)

MICROWAVE SAFETY

Grade Level: 3-5; 6-8
Suggested Time: 20 minutes

Overview

Microwaving is a cooking responsibility often assigned at a young age, but microwaves can cause fires and serious burns.

Objectives

- Students learn what is safe and what is not safe to put in the microwave.
- Students learn the importance of reading the directions to know how long to cook the food

Resources/Props/Preparation

- Microwave or picture of a microwave optional.
- Bag/box holding various kitchen items (mug, ceramic bowl, plastic bowl, bowl with foil, a metal item)
- A few prepacked microwavable foods (popcorn, soup)

The Lesson

- Hold up the picture card of the microwave oven.
- Ask students to reach in and select one item and tell if it could be used in a microwave.
- For the food items, have the children look up and read aloud the correct amount of cooking time
- Variation: Ask students to guess the cooking time for each
- Explain why some things should not be used in the microwave. Nothing with any kind of metal should go into the microwave, including foil dishes or covers.
- Remind the students:
 - Stand by your pan! Don't leave cooking unattended, whether using the microwave or the cooktop.
 - It's important to follow the cooking instructions on food packages and set the correct time.
 - Be careful when taking food out of the microwave and taking off the cover or wrapping because it may be very hot. Steam can cause burns.

WHICH WAY IS OUT?

Grade Level: 3- 5
Suggested Time: 20 minutes

Overview

In an emergency situation sight is often limited or non-existent. This activity demonstrates how easy it is to become disoriented during emergency exiting even in a familiar environment and the importance of alternate exits.

Objectives

- Reduces complacency around the belief that practicing an emergency exit is unnecessary because “I’d just run out.”
- Encourages students to practice their home exit plan both in daylight and at night.
- Increase student awareness of all the ways out of a room, house or public place and that the way you came in is not necessarily the best, closest or fastest way out.

Resources/Props/Preparation

In preparation the room should be as dark as possible (sunlight from a window can give away position), and quiet. Tell the class everyone has to stay silent throughout the activity for it to work. The teacher needs to be very clear in giving directions.

Lesson 1

- Have each student stand with both arms stretched out horizontally to insure that there is nothing or no one within reach to impede movement.
- Explain that full instructions for this activity will be given verbally, followed by the word “go”.
- On “go,” each participant will complete the activity *with no further conversation*.
- “Close your eyes. Standing in place, make 2 full turns to your right. Then 3 full turns to your left. Then 2 more full turns to your right. Once you’ve completed those turns, stop. Still keeping your eyes tightly closed, point to the exit in this room. Go.”
- Once you see that everyone has stopped and is pointing, instruct them to open their eyes. If the room was quiet and dark and each participant kept their eyes closed, everyone will be pointing in different directions.
- Alternatively, have the students stand in a circle and have each try this exercise individually.

Lesson 2

Ask the children:

- How many ways out of this room are there? How many ways out of the school are there?
- How many ways out of your house are there?
- With their parents, count all the ways out of their house.

Additional Material

- Other exit planning lessons [What To Do When the Alarm Goes Off](#) and [Search and Rescue](#)
- [Homefiredrill.org](#) includes suggestions for planning and practicing a home escape.

SEARCH AND RESCUE

Grade Level: 3-5
Suggested Time: 20 minutes

Overview

Designed and used by firefighters for training in search and rescue operations, this activity can be conducted with one or two participants while the rest of the class observes.

Objectives

- Students learn the importance of practicing an exit drill because of the disorientation caused in low light or no light conditions.
- Students learn the importance of keeping pathways clear of clutter.

Resources/Props/Preparation

Use a nearby wall and exit door.

The Lesson

- Pick a location in the room far from the exit door.
- Position the blindfolded participant(s) next to the wall.
- Instruct the first participant to begin moving toward the exit door, staying low and keeping one hand on the wall at all times.
- If there are two participants, the second participant also stays low and maintains contact with the first participant's other hand at all times.
- Encourage participants to communicate throughout the activity.
- If anything is encountered or felt as they move around the perimeter of the room, ask the participants to identify it (chair, desk, book bag, person, window).
- Once they encounter and identify the exit door, they should role play checking the door with the back of the hand to ensure the door is cold before touching the door knob.
- If participants miss the exit door, stop them in place, have them remove their blindfolds and ask them to visually review their path.
- Once the activity is complete have participant(s) describe to the class how they felt about their actions. Have those watching discuss their observations. Make the connection between escape and having clear uncluttered pathways.

Additional Material

- Other exit planning lessons include [What To Do When the Alarm Goes Off](#) and [Which Way Is Out?](#)
- Homefiredrill.org includes suggestions for planning and practicing a home escape.

SCIENCE 1 - WHAT BURNS AND HOW

Grade Level: 6 - 8

Suggested Time: 15 minutes

Overview

Students will learn about the science and mechanics of fire, and use that information to explain the reasoning behind fire safety strategies. This topic includes the definition of fire and the necessary components for fire to burn.

Objectives

Student learn that heat, fuel and oxygen are necessary for fire to burn, and how fires can be extinguished.

Resources/Props/Preparation

- [Fire Triangle presentation \(pdf\)](#)
- Fire Triangle Movie at:
http://www.glosfire.gov.uk/cd_res/KS3/downloads/Activity%201.1%20Fire%20Triangle%20Movie.wmv
- [Fire Triangle worksheet \(pdf\)](#)

The Lesson

- Have a class discussion to determine prior knowledge. Ask the students: “What is fire?” (a chemical reaction), and see if they can identify the 3 components that must react to keep fire burning (fuel, oxygen, heat).
- Show the “Fire Triangle” presentation or movie, which explains how fuel, oxygen, and heat are all needed for fire to burn. The presentation/movie also gives examples of solids, liquid, and gas fuels, and explains that if one component is missing or removed, the fire will be extinguished.
- Have students complete the Fire Triangle worksheet, which provides students with a fire prevention or treatment, and asks students to identify which part of the Fire Triangle is being eliminated.

SCIENCE 2 – SMOKE

Grade Level: 6 - 8

Suggested Time: 40 minutes

Overview

This topic includes the definition of smoke and that smoke rises due to convection, through a reading and a lab/demonstration.

Objectives

Students learn that:

- Smoke rises due to heat and low density (convection)
- To connect specific fire safety strategies with the science of fire.

Resources/Props/Preparation

[What is smoke? article](#)

[Flying Tea Bag experiment](#)

[Flying Tea Bag video](#)

The Lesson

- Ask the students some anticipatory questions: What is smoke? (a collection of tiny solid, liquid, and gas particles) How is it different from air? (smoke contains tiny unburned particles) How does smoke move and why does it move that way? (smoke rises because it is hot/less dense)
- Have students read the “What is smoke?” article. Discuss unknown vocabulary words. Revisit the answers previously discussed in the anticipatory set.
- Do the “Flying Tea Bag” experiment, either as a lab or a demonstration. You can also show the YouTube video of the experiment.
- Ask students to answer the following questions using scientific evidence/reasoning in their answers.
 - How do smoke alarms work?
 - Why are smoke alarms placed on the ceiling?
 - If there is a fire in your home, what should you do and why?
 - If there is a fire in your home, why should you close doors behind you as you leave?

Additional Material

- [Video: How Do Smoke Alarms Work?](#)

SCIENCE 3 – FLAMMABILITY

Grade Level: 6 - 8

Suggested Time: 15 minutes

Overview

This topic focuses on why materials burn, and is demonstrated by three short videos

Objectives

Students learn:

- Materials burn at different rates based on the composition (fuel source) of the material.
- The importance of responding immediately when the smoke alarm sounds--there may be only a minute or two to escape.

Resources/Props/Preparation

- [How Different Fabrics and Materials Burn](#) (3 min. 46 sec.) (This video can be sped up or not watched in its entirety.)
- [Flammability of Furniture](#) (1 min. 42 sec.)
- [Materials In Modern Homes Burn More Quickly](#) (1 min. 58 sec.)
- [Legacy Room vs. Modern Room](#) (1 min. 18 sec.)

The Lesson

- Show one or more of the videos
- After the video, ask students to identify why the fabrics burned at different rates (they had different compositions).
- Based on the information in the videos, have students brainstorm everything they know about escaping a fire. Give the students a prompt, such as, "A fire has started in your kitchen. What should you do?" The list should include information regarding escape plans, meeting points, calling 911, NOT going back inside for items/pets, getting low if there's smoke, etc.

Additional Material

- [Homefiredrill.org](#) includes suggestions for planning and practicing a home escape.

SCIENCE 4 – FIRE PREVENTION

Grade Level: 6 – 8

Suggested Time: 30 minutes

Overview

This topic includes identifying and locating potential fire hazards in the home. Using short videos and an identification/memory game.

Objective

Students will be able to Identify fire hazards in the home, and recognize that most fires start in the kitchen.

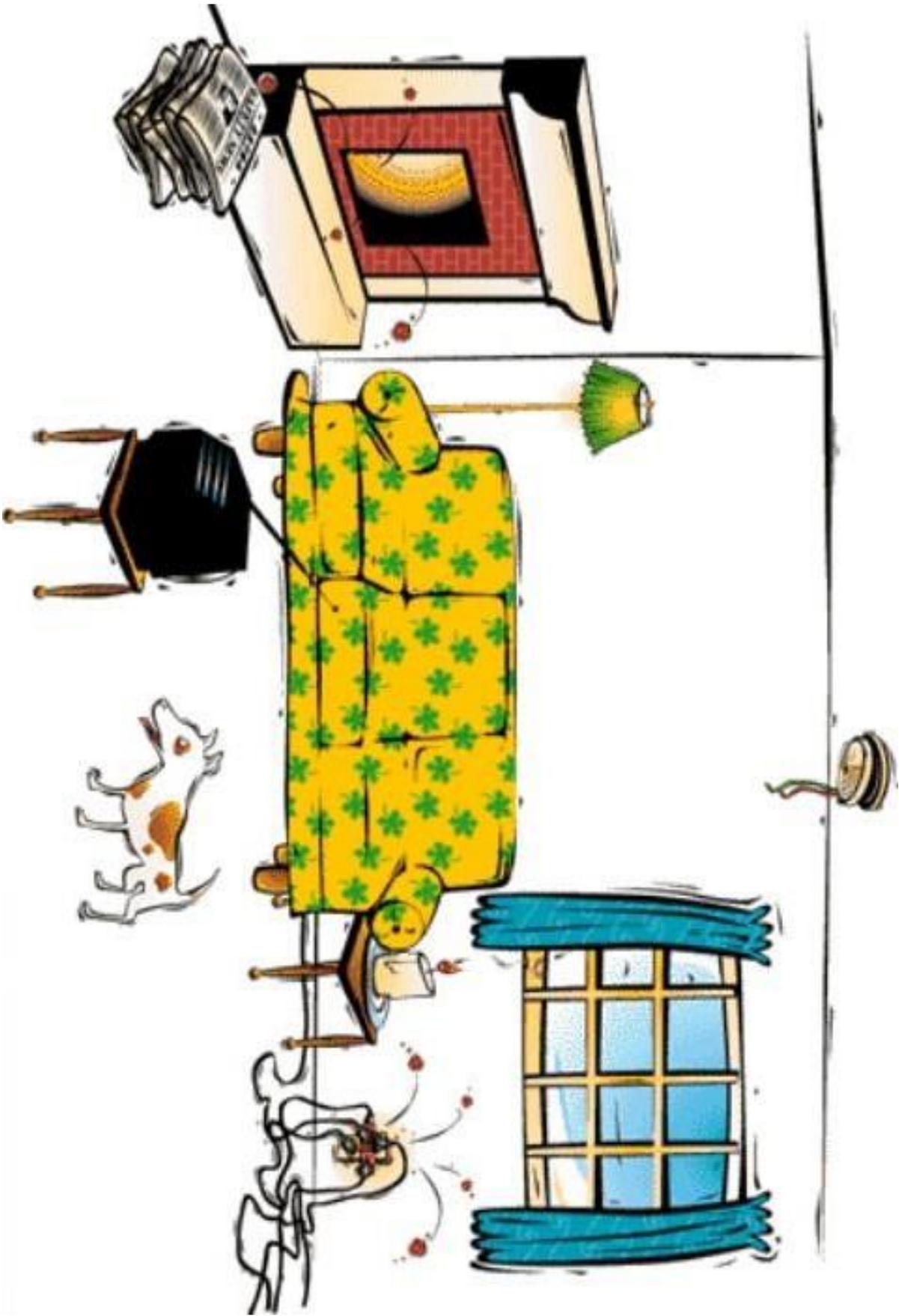
Resources/Props/Preparation

- Video: [Fire Prevention in The Home](#) (10 min. 21 sec.)
- Video: [10 Household Items That Are Highly Flammable](#) (3 min. 45 sec.)
- Video: [Putting Out Kitchen Grease Fires](#) (4 min. 3 sec.)
- Room pictures and answer sheet at the end of this lesson plan.

The Lesson

- Show the video: *Fire Prevention in The Home*.
- After the video, ask students to compile a list of fire hazards in the home that weren't mentioned in the video.
- Print out the room pictures and the answer sheet at the end of this lesson plan. Pair up students, and give them one of the pictures. Allow students to look at the picture for 20 seconds. Then have students flip the picture over so they can no longer see it, or collect the picture. Together with their partner, have students write down the fire hazards from the picture in the appropriate section of the answer sheet. Repeat with the remaining two pictures. When complete, go over the answers. The pair that has the most correct answers, wins.
- Show the video: *10 Household Items That Are Highly Flammable*
- Before watching the video, ask students how many of the 10 items (or similar items) do they have in their home? Also ask the students to determine what makes the object highly flammable? (the chemical composition/fuel source and the amount of surface area).
- After the video, discuss appropriate fire behavior in the home, such as, not “playing” with fire, asking for parents' help when cooking, not leaving candles unattended, etc.
- Have students identify the room in the home where most fires start (the kitchen). Ask students what you should do if a grease fire breaks out on the stove. Show the video: *Putting Out Kitchen Grease Fires*. After the video, ask students if they think they could put out a grease fire in their kitchen, and if they think that their parents would now what to do.
- Discuss why water will not put out a grease fire (Water and grease/oil don't mix because water molecules are more attracted to other water molecules and oil molecules are ore attracted to other oil molecules. Water molecules are denser than oil, causing oil to float on top of water. When you put water on a grease fire, the water sinks to the bottom of the pan and evaporates instantly, causing flaming grease to spread in an explosion).







Answer Sheet

Kitchen

1. _____

2. _____

3. _____

4. _____

Living

Room

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Bedroom

1. _____

2. _____

3. _____

4. _____

5. _____

Answer Key

In the kitchen:

- towel too close to the stove top
- child cooking alone
- pot handle turned in the wrong direction - it should be turned to the center of the stove to prevent burns
- smoke alarm battery missing in hallway

In the living room:

- overloaded electrical outlet
- candle too close to upholstered materials and left unattended
- T.V. left on and unattended
- mesh screen missing from in front of the fireplace
- newspapers left too close to the fireplace where a spark could ignite them
- smoke alarm battery missing

In the bedroom:

- Clothing draped over lamp where it could start to burn
- An object (duck) placed on a space heater where it could start to burn
- Space heater left on when no one is in the room
- Clothing left too close to the space heater where it could catch fire
- Smoke alarm battery missing

COMMON CAUSES OF HOME FIRES

Grade Level: 6 - 8

Overview

Very rarely is a fire in the home caused by a random event such as lightning hitting a house, or a gas main exploding. Most often the cause was human behavior. Fires and the injuries they cause can be prevented by changing our behavior.

Objectives

Students will be able to:

- Understand the major causes of home fires.
- List actions they can take to prevent home fires and understand why these actions are effective.

Resources/Props/Preparation

- <http://www.nfpa.org/news-and-research/fire-statistics-and-reports/fire-statistics/fires-by-property-type/residential/home-structure-fires> NFPA Home Fires Fact Sheet (also attached)
- <https://www.usfa.fema.gov/data/statistics/> U.S. Fire Statistics Page
- <https://www.safekids.org/fire> Safe Kids Fire Safety page
- <https://www.cdc.gov/homeandrecreationsafety/fire-prevention/index.html> The CDC's fire prevention tip sheets and additional resources

The Lesson

- Ask students to research the top five leading causes of home fires and the percentage of home fires that each cause is responsible for. Encourage students to use the links listed above.
- Ask students to select one of the top five causes and list several actions that can be taken to prevent fires and reduce injuries related to this cause. Students could also be divided into groups and assigned a cause.
- Remind students that we also increase risk of injury from home fire by ignoring obvious, but important safety precautions, such as: having no smoke alarms; having smoke alarms with dead or no batteries; having no exit plan from the home.
- Ask students to use their research to develop a public relations initiative to inform the community about the risk of injury from home fires and ways to prevent these fires. The initiative could take the form of a PSA video message, poster, tip sheets, a lesson plan for seniors, peers or younger students. Encourage the use of charts/graphs to convey information.
- Compare this assignment to existing public health programs related to smoking cessation and seat belt use.



RESEARCH

U.S. HOME STRUCTURE FIRES FACT SHEET

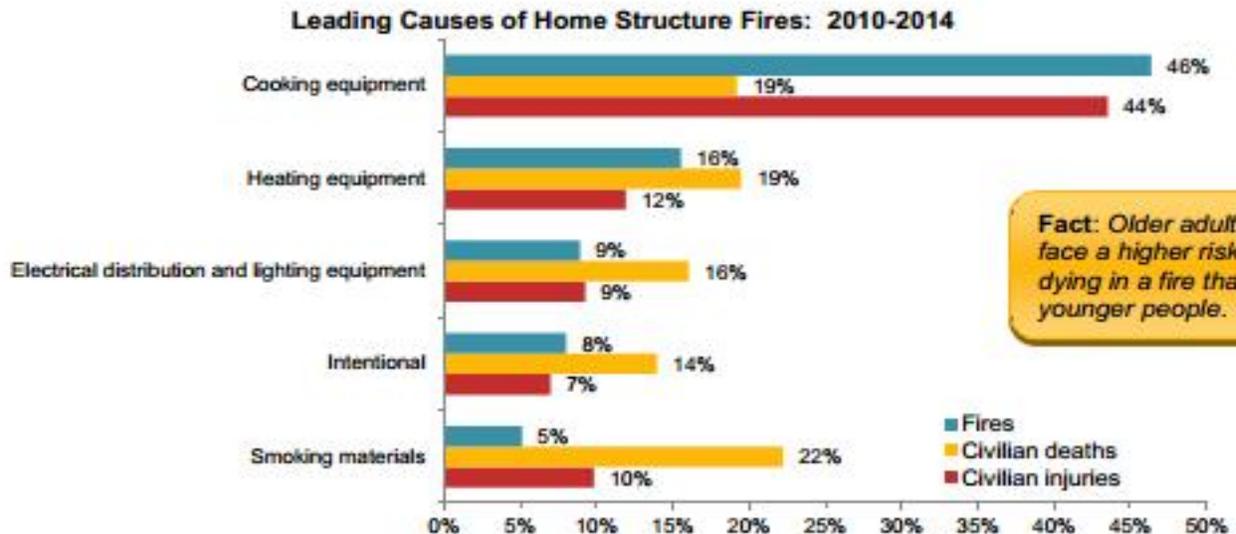
U.S. fire departments responded to an estimated average of 358,300 home structure¹ fires per year during 2010-2014. These fires caused an annual average of

- 2,520 civilian fire deaths,
 - 12,720 civilian fire injuries, and
 - \$6.7 billion in direct damage.
- 93% of all structure fire deaths resulted from home fires.
 - On average, seven people died in U.S. home fires per day.

Causes and Circumstances of Home Fires

Cooking equipment was the leading cause of home structure fires and home fire injuries.

Smoking materials were the leading cause of civilian home fire deaths. Heating equipment was the second most common cause of home fires, fire deaths and fire injuries.



Almost all homes have at least one smoke alarm, but three out of five home fire deaths in 2010-2014 resulted from fires in homes in which either no smoke alarm was present (39%) or at least one alarm was present but none operated (19%).

¹Homes include one- or two-family homes, manufactured homes, as well as apartments or other multi-family housing. In general, any fire that occurs in or in a structure is considered a structure fire, even if the fire was limited to contents and the building itself was not damaged. Estimates were derived from USFA's National Fire Incident Reporting System and NFPA's annual fire department experience survey.

FIREFIGHTING AS A CAREER

Grade Level: 3-5; 6-8
Suggested Time: 30 minutes

Overview:

Firefighting is a great career, open to students who care about their community, like physical challenges, and can work as part of a team. The salary, benefits and work schedule of firefighters are competitive, and a college degree is not required (though salaries are often higher for those that do have a degree, and free college tuition is often available for firefighters in good standing). Many fire departments are looking to hire women and people of color in particular.

Objectives:

- Students will learn what firefighters do and the variety of career options.
- Students will learn the basic job requirements of firefighters and what makes a good firefighter.
- Students will learn about the salary, benefits and work schedules of firefighters and how they compare to other careers.
- Students will learn what it takes to become a firefighter and how they can learn more about it.

Resources/Props/Preparation

Firefighting as a career: <https://www.bls.gov/ooh/protective-service/firefighters.htm>

The Lesson

- View the FF Maze YouTube video and create a maze in the classroom. Hide a couple of dolls throughout the maze for the Firefighting students to find!
- Blindfold two students, turn off the lights, and have them work through the maze together. Students must be quiet – no other students cannot help them!
- Fitness is important when you're a firefighter! Watch this YouTube video and try some firefighter exercises in the classroom! (You may want to have some pretend dumbbells): <https://www.youtube.com/watch?v=7YRdQA+GTBA>

Additional Material

- Lessons from the Great Chicago Fire video (sparky.org)
- Weird History video (sparky.org)
- Call your local fire department or visit your local fire house – firefighters love their jobs and are often happy to come and talk to a class or host a visit from one!