

## **Lesson Plan Summary**

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**Curriculum: Heating and Cooking Related Fires**

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**Module Summary:**

**Length: 1.5 hr Method: Lecture Evaluation: none**

**References: USFA, South Carolina Fire Incident Reporting System**

**Equipment and Facilities:**

**Visual Aids: Computer, PowerPoint™ Presentation: Heating and Cooking Presentation, Data Projector**

**Instructor Preparation: 1 hr**

**Additional Instructors: None**

**Module Objectives:**

**Participants will:**

**Know the importance of smoke alarms and their maintenance**

**Know the components of a Home Exit Plan**

**Identify the various heating systems and the proper methods of operation for each system**

**Identify potential risks associated with cooking and learn behaviors to prevent carelessness while cooking**

Teaching Outline	Techniques, A/V's, And Devices
<p>A. The Residential Fire Problem</p> <p>Around 85% of structure fires in South Carolina occur in residential homes and are attributed to heating and cooking related incidents.</p> <p>Each year, thousands of people are killed or injured in home fires. Unfortunately, this is where people often feel the safest, having a false sense of security.</p> <p>Your home is the most dangerous place and the most likely place to experience a fire.</p> <p>Unfortunately, just by living in South Carolina, your chances of having dying in a fire are almost doubled. That's right! South Carolina's national fire fatality rate historically ranks in the top ten states in the nation having the highest fire fatality rates.</p> <p>The leading causes of home fires in South Carolina are heating, cooking and careless smoking, and attributes to millions of dollars in fire losses, deaths, and injuries. These fires help put South Carolina in the top ten states in the nation having the highest fire death rates per population.</p> <p>Nationally, Smoking materials were the leading cause of fire fatalities. In South Carolina, typically speaking, heating related fires causes the largest number of fire fatalities, with cooking and smoking related fires closely following.</p>	<p>SLIDE 1</p> <p>SLIDE 2</p> <p>SLIDE 3</p> <p>SLIDE 4</p> <p>SLIDE 5</p> <p>SLIDE 6</p> <p>SLIDE 7</p>
<p>B. Why Does South Carolina Have Such a High Fire Fatality Rate?</p> <p>Many factors impact on this high death rate. Historically and typically, the low economic level forces citizens to turn to alternative means of heating and cooking.</p>	<p>SLIDE 8</p>

The low educational level of many citizens prohibits the ability to read and understand manufacturer's instructions for installation, use, and maintenance of space heaters.

Older homes need electrical repairs, adequate wiring, and chimney repairs and cleaning on a regular basis.

Many low-income families do not understand the importance of smoke alarms and many do not consider the installation of these devices a high priority.

C. What can you do to make your home a more fire safe place?

Practice general fire safety and fire prevention guidelines by:

- a. Installing and maintaining smoke alarms and
- b. Preparing and practicing a home escape plan

Smoke Alarms:

Smoke Alarms more than double your chances of surviving in the event of a fire. Most fires occur at night while people are sleeping and the alarm serves as an early warning device to give more time for escaping.

- i. For maximum protection, smoke alarms should be installed in every room and on every level of your home. For minimal protection, install smoke alarms between living and sleeping rooms and on every level. Always follow manufacturers' guidelines for installation or contact your fire department for assistance
- ii. Make sure your alarms work - If they don't work, they can't help protect you!

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- iii. Test your alarm once a month. If it doesn't operate, replace the battery. Smoke alarms have an approximate ten-year life span, and may need to be replaced if unit is several years old.

Exit Drills in the Home (E.D.I.T.H) Plans:

Develop a thorough fire escape plan and practice it at least twice a year. The more you practice your escape, the less likely you are to panic in a "real" fire situation.

Your plan should include:

- Identify two ways out of every room.
- Establish a meeting place outside and make sure everyone knows where to meet. Have a method of identifying the fire department from outside of your home.
- Teach everyone in your household that once they are out, they must stay out. Never go back inside.
- Keep in mind that smoke and toxic gas produced from the fire rise to the ceiling. The closer to the floor you are, the cooler and cleaner the air.

D. HEATING SAFETY

Heating related fires is the leading cause of fire fatalities in South Carolina. Non-central heating fires, especially in rural areas, present a major problem in trying to stay warm during the winter months.

Know the safety rules for using alternate heating sources.

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VIDEO

a. Electric Space Heater - cause over 160 deaths per year and costs approximately 50 million dollars annually.

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- Make sure that you have the right wiring and outlets with sufficient voltage.
- Should be approved by a nationally recognized testing laboratory.
- Should have an automatic shut-off switch that will turn off if tipped over.
- Keep all combustible materials at least three feet away from heater.
- Keep children and pets away from heater to avoid tipping unit over or electrical shock.
- Avoid using extension cords. If one must be used, use one that can carry the electrical load indicated by the unit.

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b. General Electrical Safety – Causes over 160 deaths per year with property losses over 50 million dollars.

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- Inspect electrical wiring often and replace all frayed or broken electrical cords.
- Never use an appliance with exposed wires.
- Don't overload extension cords, and keep them out of traffic areas
- Electric blankets should conform to the appropriate standards – having overheating protection. Avoid washing blankets repeatedly as this can damage their electrical circuitry.

b. Fireplaces- Property losses from fireplaces cost approximately 90 million annually and cause over 30,000 fires per year.

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- Make sure that both the chimney and the fireplace are serviced annually and are in top working order.
- Check chimney for cracks, loose bricks, or other defects before the heating season.
- Burn only seasoned hardwoods, (oak, ash, elm, maple and birch). Softwoods burn very quickly and create excessive smoke.
- Never use gasoline, kerosene, or lighter fluid to start a fire.
- Keep a screen or heat tempered glass door in front of the fireplace to prevent sparks from flying onto flammable materials.

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c. Wood Burning Stoves – Cause over 120 deaths per year and approximately 90 million dollars annually.

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- Top chimneys with spark guards.
- Have an experienced professional install the unit.
- Check the chimney to ensure good working order and condition on a regular basis.
- Make sure stove has approval from a nationally recognized testing laboratory (UL Approved).
- Use adequate ventilation.

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<ul style="list-style-type: none"><li>• Keep all combustibles at least three feet away.</li><li>• Shovel ashes into a metal container and store outside.</li><li>• Follow manufactures guidelines for installation and use.</li></ul> <p>d. Kerosene Heaters – cause over 140 deaths per year and if using the wrong fuel, can turn into a firebomb.</p> <ul style="list-style-type: none"><li>• Select a heater appropriate to the size of the room.</li><li>• Should have a safety shut-off valve.</li><li>• Use only pure kerosene. Never use yellow or colored kerosene.</li><li>• Use in a properly ventilated area.</li><li>• Never operate unattended or while occupants are sleeping.</li><li>• Store kerosene outside in an approved container.</li><li>• Always refill the heater outside and only when unit is cool.</li></ul>	<p>SLIDE 24</p> <p>SLIDE 25</p>
<p>E. Cooking Safety</p> <p>Cooking Safety – Kitchens can be the most dangerous area of your home and kitchen fires are the leading cause of home fires in South Carolina.</p> <ul style="list-style-type: none"><li>• Never leave the stove unattended while cooking. Someone should be in the kitchen at all times when something is cooking particularly when using grease or oil.</li></ul>	<p>SLIDE 26 VIDEO</p> <p>SLIDE 27</p>

- Appliances should be turned off promptly after use.
- Wear tight fitting clothing while cooking, and keep towels, potholders and other flammable materials away from the stove.
- If food or grease catches fire, smother the flames by sliding a lid over the pan and turning the unit off. Do not try to extinguish grease fires with water.
- Make sure the stove is kept clean and free of grease buildup.
- Cooking oil should be heated slowly to prevent fires from starting easily.
- Turn pot handles away from the front of the stove so they cannot be knocked over or pulled off.
- Don't use small pans on large burners. The flames or heat comes up and around them and ignites things – or you!
- Never use the range or oven to heat your home.
- Microwave ovens stay cool, but what is in them can get very hot. Remove lids with caution to prevent steam burns. If anything catches fire inside the microwave, Leave the door shut and turn the microwave off. Opening the door will only add fuel to the fire by providing more oxygen.
- Double-check the kitchen before you go to bed. Are the stove and oven turned off?

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**SUMMARY:**

Always practice good fire safety. Install and maintain smoke alarms; prepare and practice your escape plan; pay particular attention to the safe use of alternate heating sources, and be careful and mindful when cooking.

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