

**Basic Evacuation Planning  
and Fire Extinguishers  
Lake County Safety Council  
October 16, 2009**

**Professor Lee Silvi, Director  
Fire Science Technology and  
Emergency Management programs  
Lakeland Community College**

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**Lake County Safety Council**  
**October 16, 2009**

**Lee Silvi – 27 years of Fire Service experience with the Mentor and Fairport Harbor Fire Departments:**

- **Firefighter**
- **Training Officer**
- **Certified Fire Inspector**
- **State Certified Instructor**
- **Public Education Officer**
- **Lieutenant**
- **Fire Chief (Fairport Harbor)**
- **Safety Officer (Mentor)**

**Lake County Safety Council**  
**October 16, 2009**

**Today's Major Topics:**

- **Basic Evacuation Planning**
- **Classes of Fire**
- **Fire Extinguishers**

**This is a  
TEST!**

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**BE HONEST WITH YOURSELVES  
and FOLLOW THESE INSTRUCTIONS:**

**(1) Keep your hands to yourself 😊**

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- (2) Close your eyes and**
- (3) Keep them closed until I tell  
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- (4) Now .....**

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- (4) Now – the test !**

**Did you pass the TEST?**

**“Everything I need  
to know in life  
I learned in  
Kindergarten”**



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**This is why Evacuation Planning is so critical!**

**Some real life Examples .....**

# **Basic Evacuation Planning**

**Formal or informal evacuation planning can and should be done at:**

**Home,  
Work, and  
Anywhere you go!**

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## Do I need an Emergency Action Plan (EAP) at Work?

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## Do I need an Emergency Action Plan (EAP) at Work?

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**“The only exemption to this is if you have an in-house fire brigade in which every employee is trained and equipped to fight fires, and consequently, no one evacuates.”**



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- **Rescue and medical duties**

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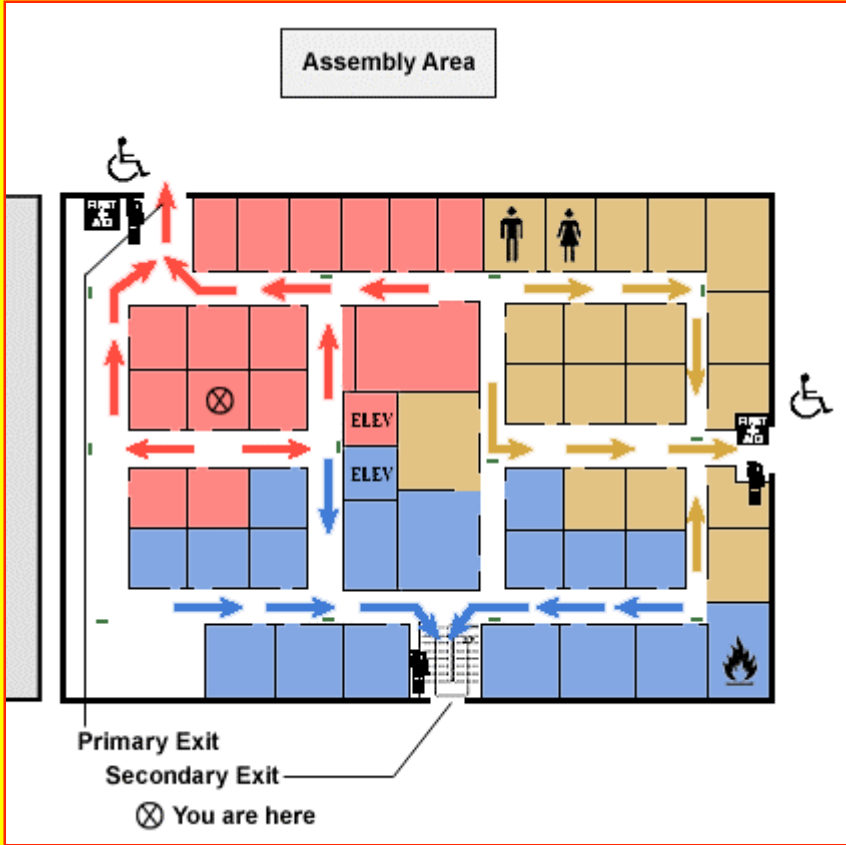
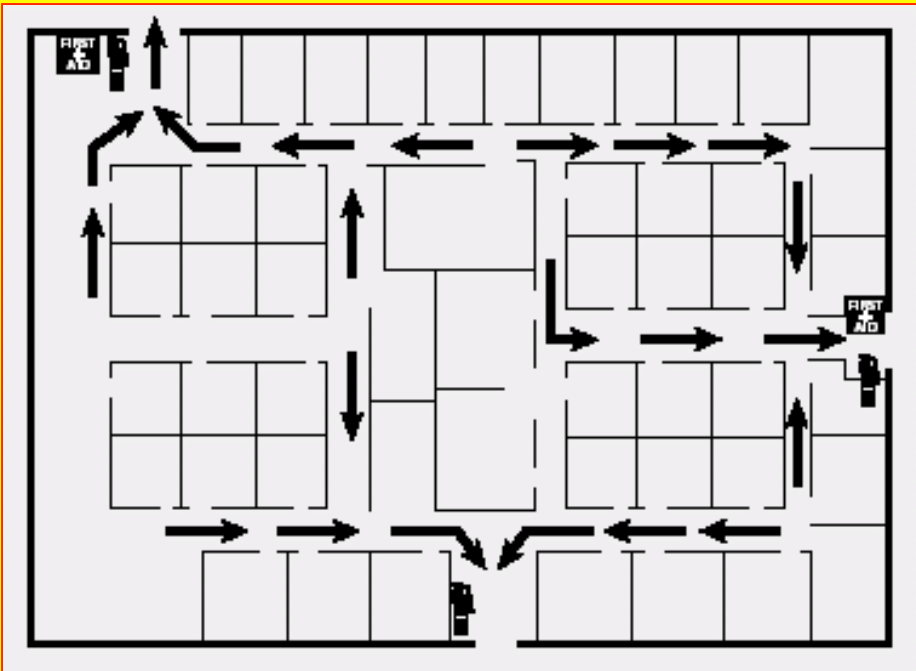
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**For details on Emergency Action Planning visit  
<http://www.osha.gov/SLTC/etools/evacuation/need.html>**





**The Five**

**Classes**

**of Fire**

**(in the United States)**

# CLASSES OF FUEL OR FIRES



**Class A**

- Ordinary Combustibles



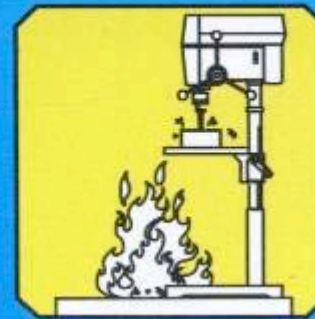
**Class B**

- Flammable Liquids and Greases



**Class C**

- Live Electrical Equipment



**Not an "official"  
Class D graphic**

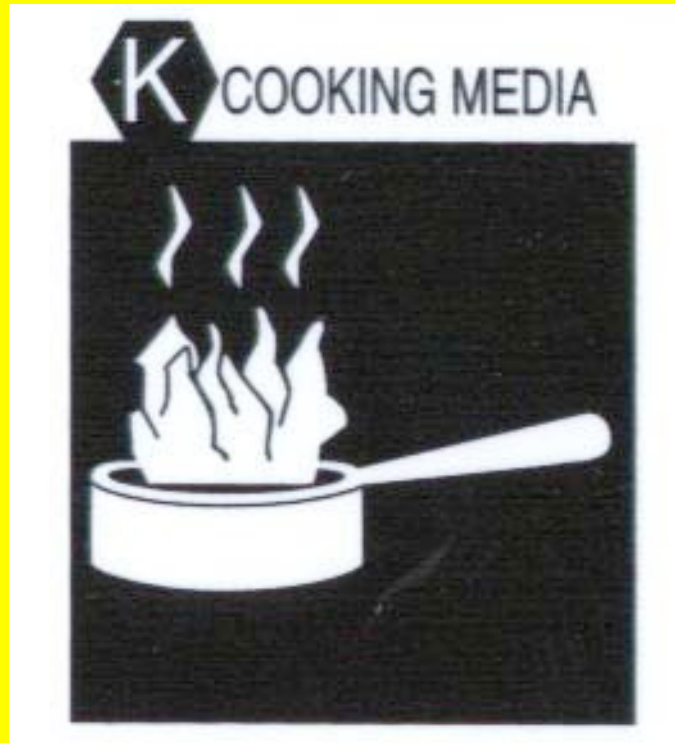


**Class D**

- Combustible Metals

**Note: The use of some letter symbols is being phased out in the US**

# **New Class of Fire as of 1998 = Class K**



**Per NFPA 10, Class K fires are “cooking appliance fires that involve vegetable or animal oil and fats”**

# **Portable Fire Extinguishers**

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- **The fire department has been called**
- **Occupants have been notified to evacuate**

There is **NO** single fire extinguisher rated for use on all five classes of fire!



The use of the incorrect extinguisher could make the fire **WORSE** and/or cause **injury** or **death** to the user and others nearby!

## TYPICAL PICTURE SYMBOLS

	Picture symbols for extinguishers suitable for Class B and C fires, but not for Class A fires
	Picture symbols for extinguishers suitable for Class A fires, but not for Class B and C fires
	Picture symbols for extinguishers suitable for Class A and B fires, but not for Class C fires

**Note: The red slash means NOT usable on that type of fire, but sometimes these lines fade when exposed to sunlight** 37

# Some Extinguishers for Class A Fires

**Water**



**Foam**



**Multi-Purpose Types**



# Some Extinguishers for Class B Fires

## Foam



## B:C Rated Dry Chemical



# Some Extinguishers for Class B Fires

## Carbon Dioxide



## Halon / Clean Agents





# Some Extinguishers for Class C Fires

**Water Mist**



**B:C Rated Dry Chemical**



# Some Extinguishers for Class C Fires

## Carbon Dioxide



## Halon / Clean Agents



## Example Extinguisher for a Class D Fires

**Dry Powder or  
Dry Compound**

**BUT:**

**Some Class D fires  
require specialized  
Class D Agents!**



**Class D Agents may also be carefully applied by scooping  
or shoveling the agent from pails, buckets, or drums.**

# Some Extinguishers for Class K Fires

May be an aqueous potassium acetate based agent



**Do NOT use  
Soda Acid  
Extinguishers**



**Soda Acid (*The four on the left*)  
vs. Pressurized Water (*Right*)**



**Rule of Thumb:**  
**Do NOT use an extinguisher if ...**

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## **Rule of Thumb:** **Do NOT use an extinguisher if ...**

- It has a riveted seam!
- If the instructions for use tell you to turn the extinguisher upside down to use it
- **If any extinguisher has not been properly maintained or appears to be damaged**

# Carbon Tetrachloride Extinguishers:

DO **NOT** USE !

Poisonous Gases

May Result  
from Use !



**Additionally,  
You may not wish to  
use any extinguisher  
that is not UL listed  
or FM approved !  
(Even if it is new/newer)**

# Extinguisher Inspections **BEFORE** a Fire Ever Occurs:

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- **Correct class for the hazards in the area?**

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- **Properly mounted and visible?**
- **Accessible / Unobstructed?**
- **Signs of damage or tampering?**
- **Gauge pressure correct (if applicable)?**
- **Correct class for the hazards in the area?**
- **Has it been inspected (recommended monthly) and/or serviced (annually)?**

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- **Is the fire small enough to fight?**

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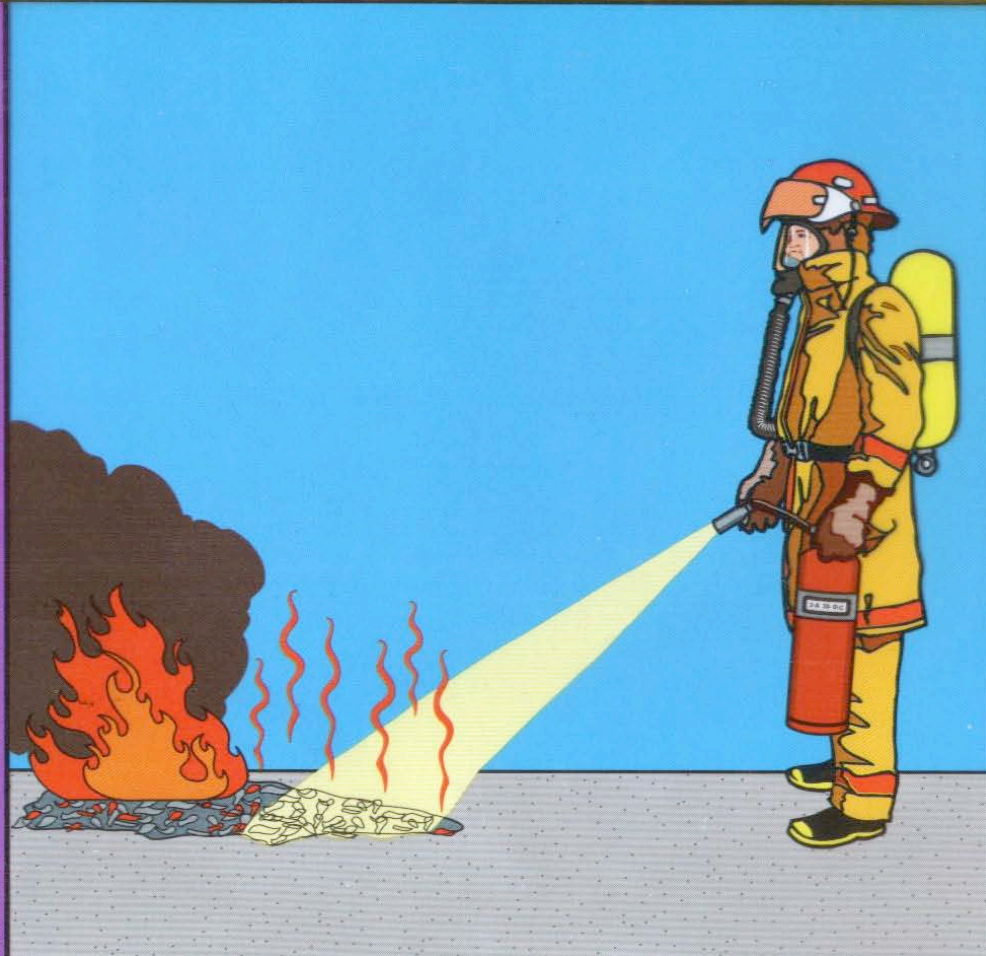
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- **Do you have an escape route?**

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- Does the gauge indicate correct pressure?
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- Is the room full of smoke?
- Is the fire small enough to fight?
- Do you have an escape route?
- **If safe to do so, proceed / remember “PASS”**

## GENERAL OPERATION

- P**ull pin.
- A**im nozzle.
- S**queeze handle.
- S**weep nozzle.



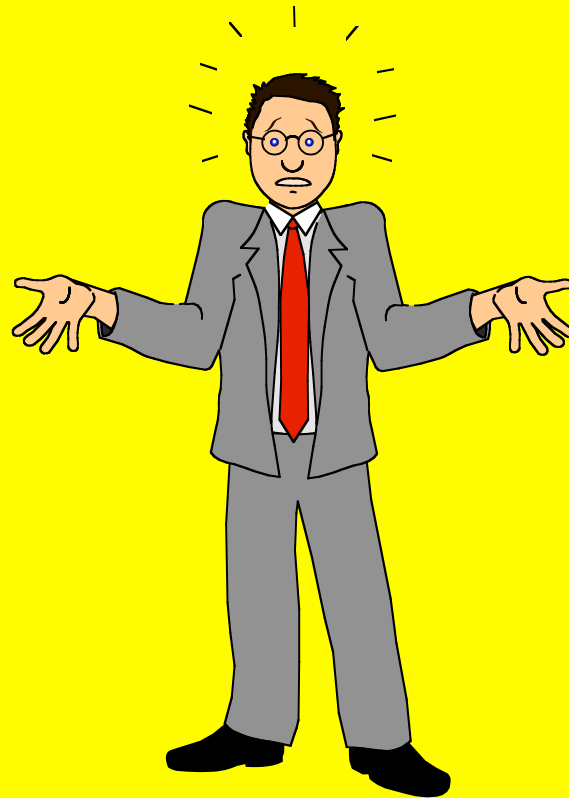
(And be sure you are aiming at the base of the flames)

# Sample Extinguisher Ratings

<b>2A</b>	<b>Rated for Class A fires only</b>
<b>10BC</b>	<b>B &amp; C Rated, 10 square feet for Class B*</b>
<b>2A40BC</b>	<b>ABC Rated, 40 square feet for Class B*</b>
<b>80BC</b>	<b>B &amp; C Rated, 80 square feet for Class B*</b>
<b>2A:C</b>	<b>Rated for Class A &amp; C fires only</b>
<b>D</b>	<b>Rated for a specified Class D fire(s) only</b>
<b>1A:K</b>	<b>Rated for Class A &amp; K fires only</b>

*\* = The square footage rating for Class B fires is usually based on use by a trained but non-expert user.*

# Any Questions ???



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**or contact Lee Silvi by phone or e-mail**