

# Fire Safety



# Fire Safety

- **Fire is the third leading cause of accidental deaths in the United States**
- **Workplace fires and explosions kill 200 and injure more than 5,000 workers each year.**



# Fire Safety

- **In 2004 there were 1.6 million fires reported costing 9.8 billion dollars.**
- **There were nearly 3900 civilians killed and almost 17,800 injured. 83% of deaths and injuries occurred at home.**



# Fire Safety

- **There were 36,500 arson fires causing 714 million in damage and 320 deaths.**
- **117 firefighters also died.**



# In your building, know the location of:

1. The nearest exit.
2. A secondary route of escape.
3. The location of fire extinguishers.
4. The location of fire alarm pull stations.



# Fire Safety



## Some Causes of Fire ?

Electricity  
Housekeeping  
Cleaning Supplies  
Flammable Liquids  
Machinery

Improper Storage  
Space Heaters  
Construction  
Combustible Liquids  
Unattended Cooking

Careless smoking

**Prevention is the best way to  
fight a fire!**

# How to Prevent Fires

- **Keep storage and work areas free of trash.**
- **Place oily rags in covered containers**
- **Don't refuel gasoline-powered equipment in a confined space.**
- **Don't refuel gasoline-powered equipment while it's hot.**
- **Keep flammable liquids stored in tightly closed, self-closing, spill-proof containers.**
- **Store flammable liquids away from spark-producing sources.**
- **Use flammable liquids only in well-ventilated areas.**

# How to Prevent Fires (continued)

- **When using space heaters, electric or fuel burning, keep them away from combustibles**
- **Make sure you use the correct fuel**
- **Use extreme care when using candles**
- **Don't misuse fuses**
- **Don't overload electrical circuits**
- **Use surge protectors instead of drop cords and multiplug adapters**
- **Investigate any appliance or electrical equipment that smells strange**

# How to Prevent Fires (continued)

- **Don't cover ventilation holes in appliances**
- **Don't use appliances that are not working properly or have safety features bypassed**
- **Make sure cords are not damaged, crushed, or placed in high traffic areas or under carpets and rugs**
- **When cooking make sure combustibles don't come in contact with burners**
- **Make sure decorations are UL listed**

# Portable Fire Extinguisher Training



*The importance of  
portable fire  
extinguishers?*

**Your first line  
of defense!**

# Portable Fire Extinguisher Training

## What we are going to Learn:

- 📄 What "fire" is.
- 📄 Classifications of fire.
- 📄 Types of portable fire extinguishers.
- 📄 How to use a portable fire extinguisher.
- 📄 Making the "right" decision.
- 📄 Reporting an emergency.

# Portable Fire Extinguisher Training



What is Fire?

A rapid chemical reaction.

The self-sustaining process of rapid oxidation of a fuel, which produces heat and light.

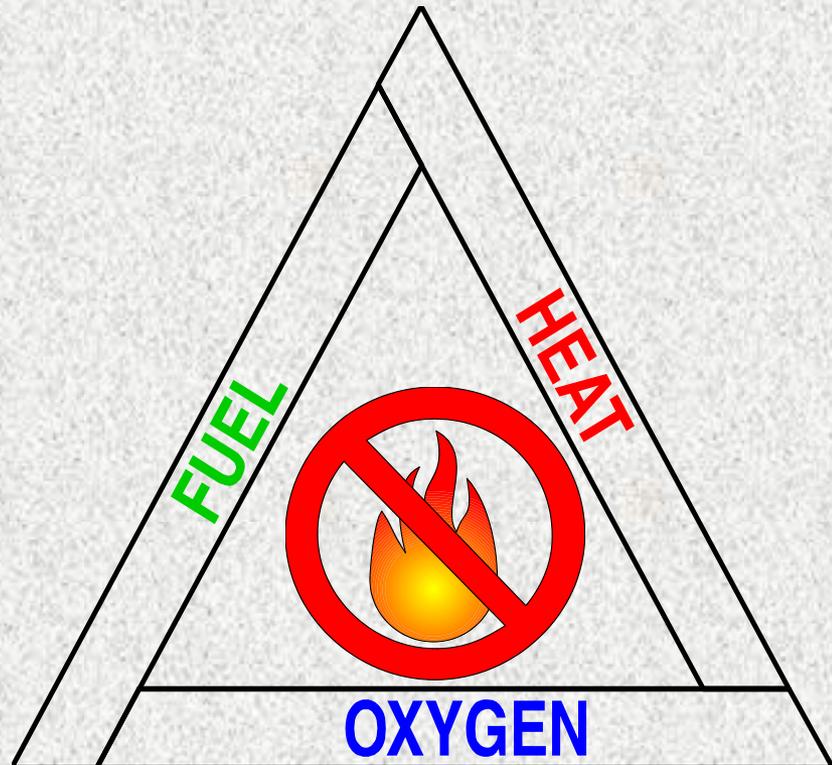
# Portable Fire Extinguisher Training

## Extinguishment Theory

- Removing Heat
- Removing Fuel
- Reducing Oxygen

### WILL

- Inhibit Chemical Chain Reaction



# Portable Fire Extinguisher Training

## Classification of Fire

### Class A or Ordinary Combustibles

This includes fuels such as wood, paper, plastic, rubber, and cloth.



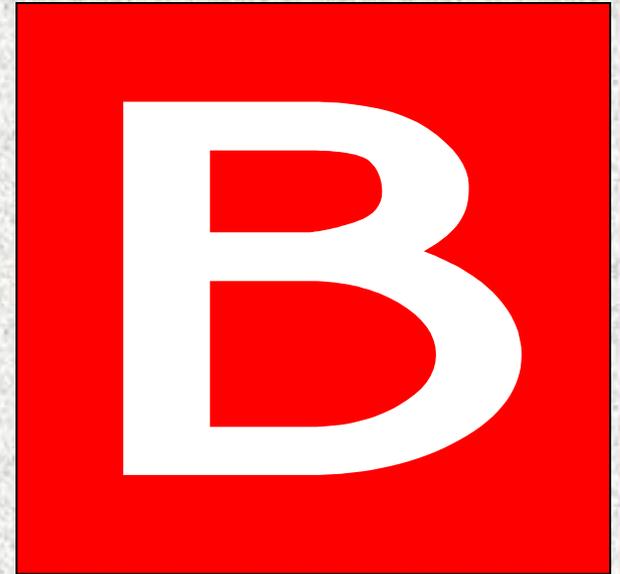
Green Triangle

# Portable Fire Extinguisher Training

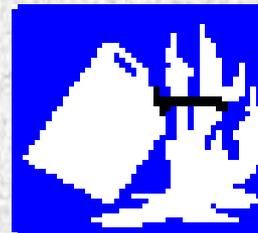
## Classification of Fire

### Class B or Flammable and Combustible Liquids and Gases

This includes all hydrocarbon  
and alcohol based liquids and  
gases that will support  
combustion.



Red Square

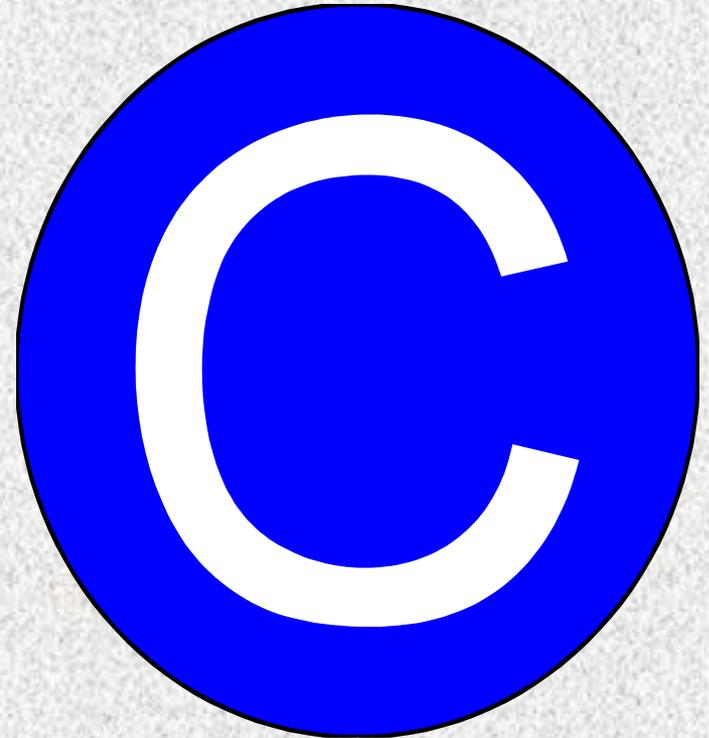


# Portable Fire Extinguisher Training

## Classification of Fire

### Class C or Electrical

This includes all fires involving energized electrical equipment.



Blue Circle

# Portable Fire Extinguisher Training

## Classification of Fire

### Class D or Combustible Metals

Examples of these types of metals are: zirconium, titanium, potassium, and magnesium.



Yellow  
Star

# Portable Fire Extinguisher Training

## Classification of Fire

Class K is for fires in unsaturated cooking oils in well insulated cooking appliances in commercial kitchens.

2A:1B:C:K

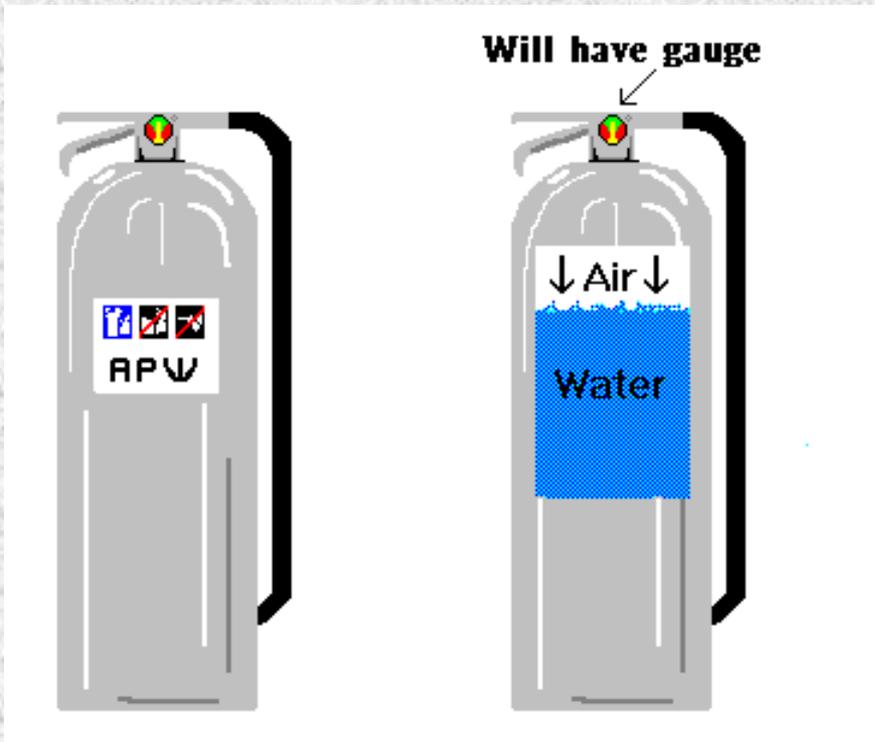


Model 260

Model 262

# Types of Fire Extinguishers

## 1. Water (APW) Fire Extinguishers



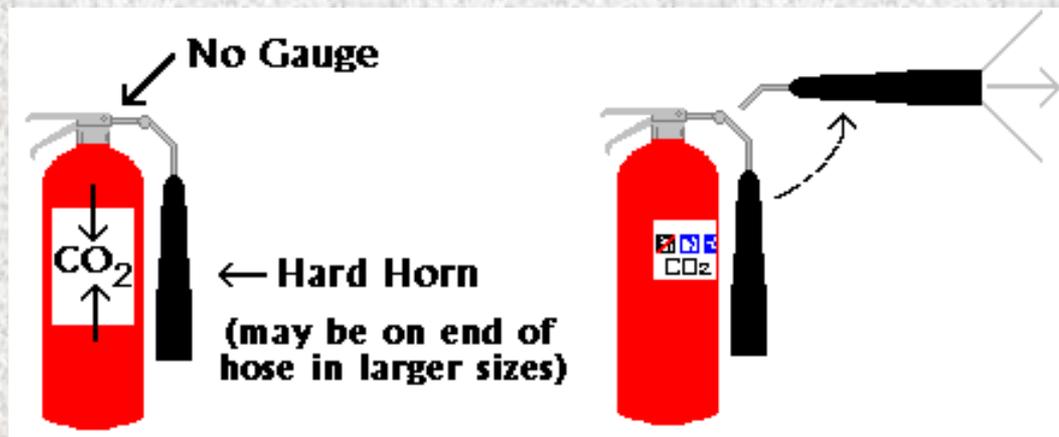
Large silver fire extinguishers that stand about 2 feet tall and weigh about 25 pounds when full.

APW stands for “Air-Pressurized Water.”

Filled with ordinary tap water and pressurized air, they are essentially large squirt guns.

# Types of Fire Extinguishers

## 2. Carbon Dioxide Fire Extinguishers

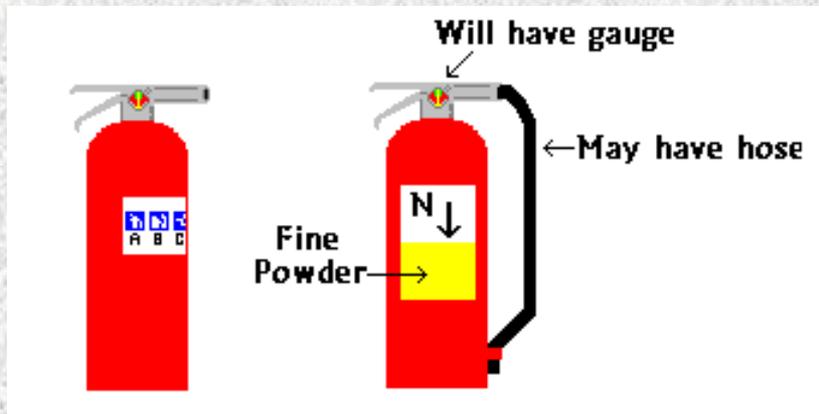


The pressure in a CO<sub>2</sub> extinguisher is so great, bits of dry ice may shoot out of the horn!

CO<sub>2</sub> cylinders are red. They range in size from 5 lbs to 100 lbs or larger. On larger sizes, the horn will be at the end of a long, flexible hose.

# Types of Fire Extinguishers

## 3. Dry Chemical (ABC) Fire Extinguishers

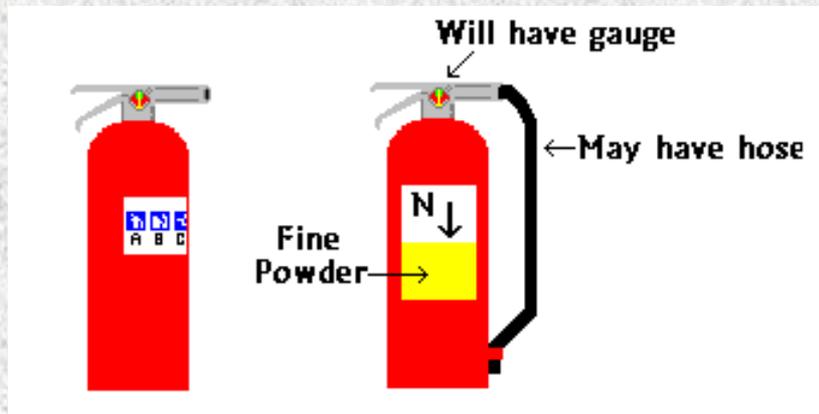


ABC extinguishers are red, they range in size from 5 to 20 lbs.

“ABC” fire extinguishers are filled with a fine yellow powder. The greatest portion of this powder is composed of monoammonium phosphate. The extinguishers are pressurized with nitrogen.

# Types of Fire Extinguishers

## 3. Dry Chemical (ABC) Fire Extinguishers



Dry chemical extinguishers come in a variety of types...

You may see them labeled:

- DC (for “Dry Chemical”)
- ABC (can be used on Class A, B, or C fires)
- BC (designed for use on Class B and C fires)

# Portable Fire Extinguisher Training

## Characteristics



Water extinguisher 30-40 ft. 60 sec.



Dry chemical 5-20 ft. 8-25 sec.



CO2 extinguisher 3-8 ft. 8-30 sec.

# “Quick-Check”

## Is It Ready To Use ?

1. Check the gauge. The pressure indicator should be in the green zone. (CO2 extinguishers do not have pressure gauges.)
2. The extinguisher should have a current inspection tag.
3. The pin and handle should be secured with a plastic tab seal.
4. The extinguisher and hose should be free of any visible damage.

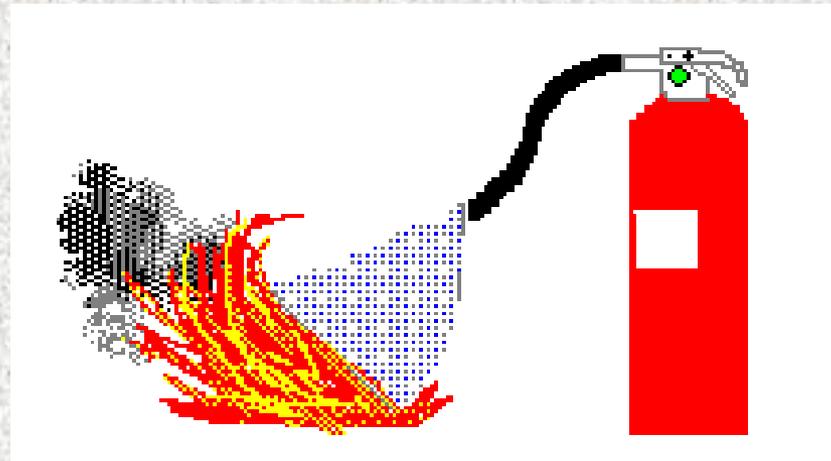


# How to Use a Fire Extinguisher



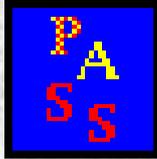
It's easy to remember how to use a fire extinguisher if you remember the acronym PASS:

- **P**ull
- **A**im
- **S**queeze
- **S**weep

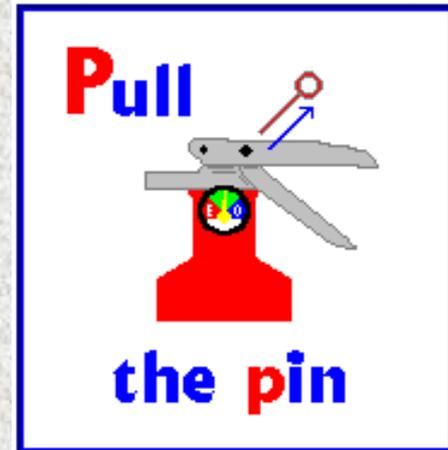


# How to Use a Fire Extinguisher

**P**ull the pin...



This will allow  
you to  
discharge the  
extinguisher



# How to Use a Fire Extinguisher



**A**im at the base of the fire...

**Hit the fuel.**  
**If you aim at**  
**the flames...**



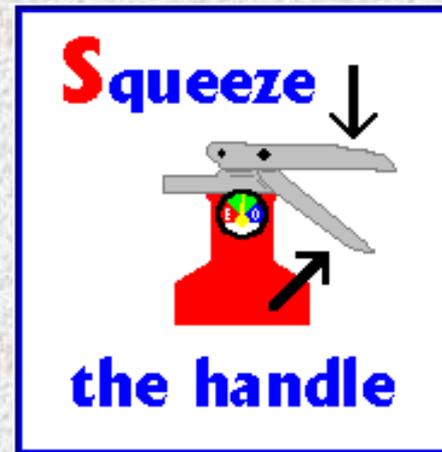
... the extinguishing agent will fly right through and do no good.

# How to Use a Fire Extinguisher

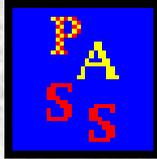
**S**queeze the top handle...



This depresses a button that releases the pressurized extinguishing agent.



# How to Use a Fire Extinguisher



**S**weep from side to side...

**.. until the fire is completely out.**

Start using the extinguisher from a safe distance away, then slowly move forward.

Once the fire is out, keep an eye on the area in case it re-ignites.



# Portable Fire Extinguisher Training

## Making That "Right" Decision To use a Portable Fire Extinguisher

- 📄 You are trained in the use of extinguishers.
- 📄 You know what is burning.
- 📄 Fire is not spreading rapidly.
- 📄 Smoke and heat has not filled the area.
- 📄 You have a clear path of escape.
- 📄 Follow your instincts.



# Safety Precautions when fighting a fire



- Stay upwind of to the fire.
- Stay low, never try to work over top the fire.



# Safety Precautions when fighting a fire

- Spray the extinguisher at the base of the fire.



# Safety Precautions when fighting a fire

- Never allow the fire to get between you and a route to escape.



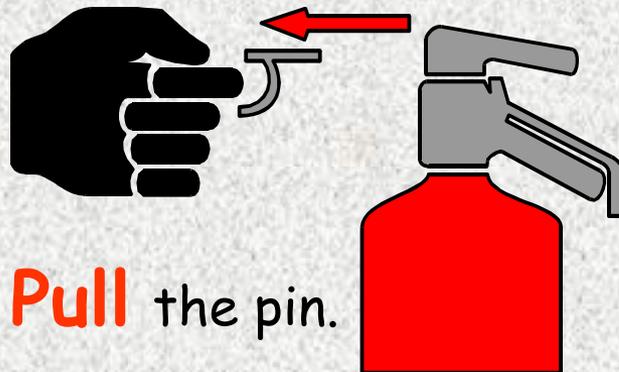
# Safety Precautions when fighting a fire

- Never go into a unknown area to fight a fire.

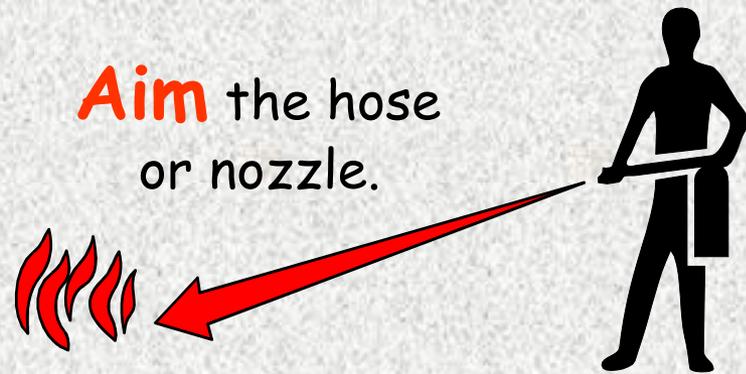


# Portable Fire Extinguisher Training

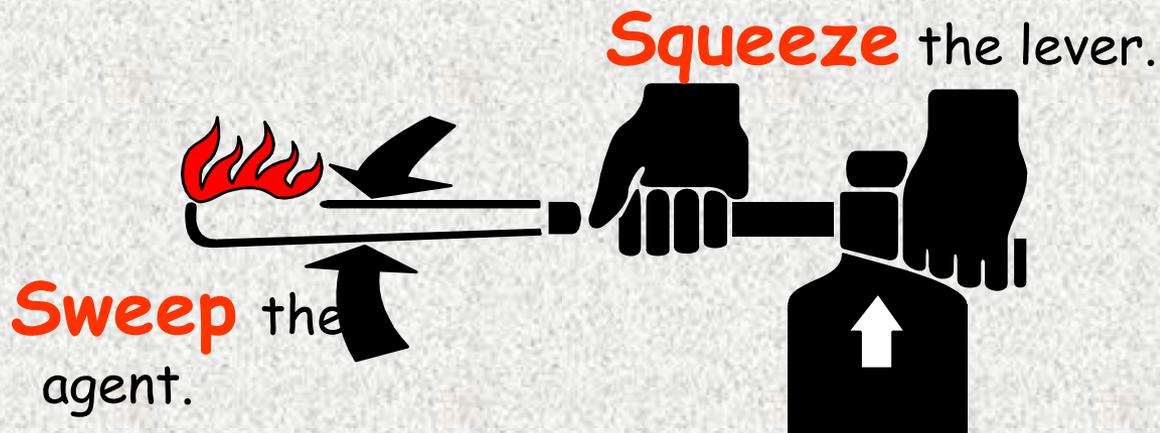
## The P.A.S.S. Method



**Pull** the pin.



**Aim** the hose  
or nozzle.



**Sweep** the  
agent.

**Squeeze** the lever.

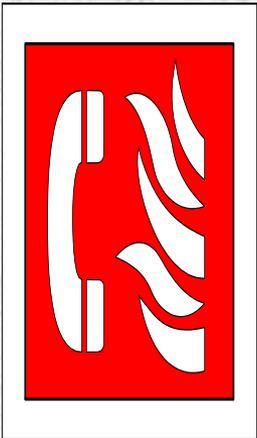
# Portable Fire Extinguisher Training

## Reporting an Emergency

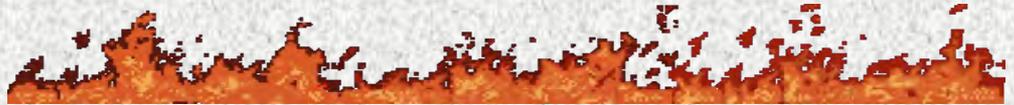
 Dial 911.

 It is not recommended you stay in the building to call. Call from a nearby building or a cell phone.

 Give as much information as possible to the emergency dispatcher. Stay on the phone with the dispatcher until they tell you that you can hang up.



# Portable Fire Extinguisher Training



You are not  
expected  
to be **firefighters!**  
Do not take  
unnecessary risks!

# Conclusion



***You cannot have a fire unless all three sides of a fire triangle are present. Practice and understand good fire prevention techniques. Understand when and when not to fight a fire.***

***Read the instructions on the fire extinguisher **BEFORE** you need it and know that it is the right one for the job.***

# Portable Fire Extinguisher Training

**Thank You  
For Your  
Time!**

**Any Questions?  
Contact the Albemarle  
Fire Department at:  
704-984-9475 or the  
Stanly County Fire  
Marshal's Office at:  
704-986-3650**

