WELCOME TO FIRE SAFETY AND PREVENTION SEMINAR

FOREWORD

he bodies of two people lie in the hallway of the Manor Hot
ost of the victims died of suffocation from the smoke of the fi

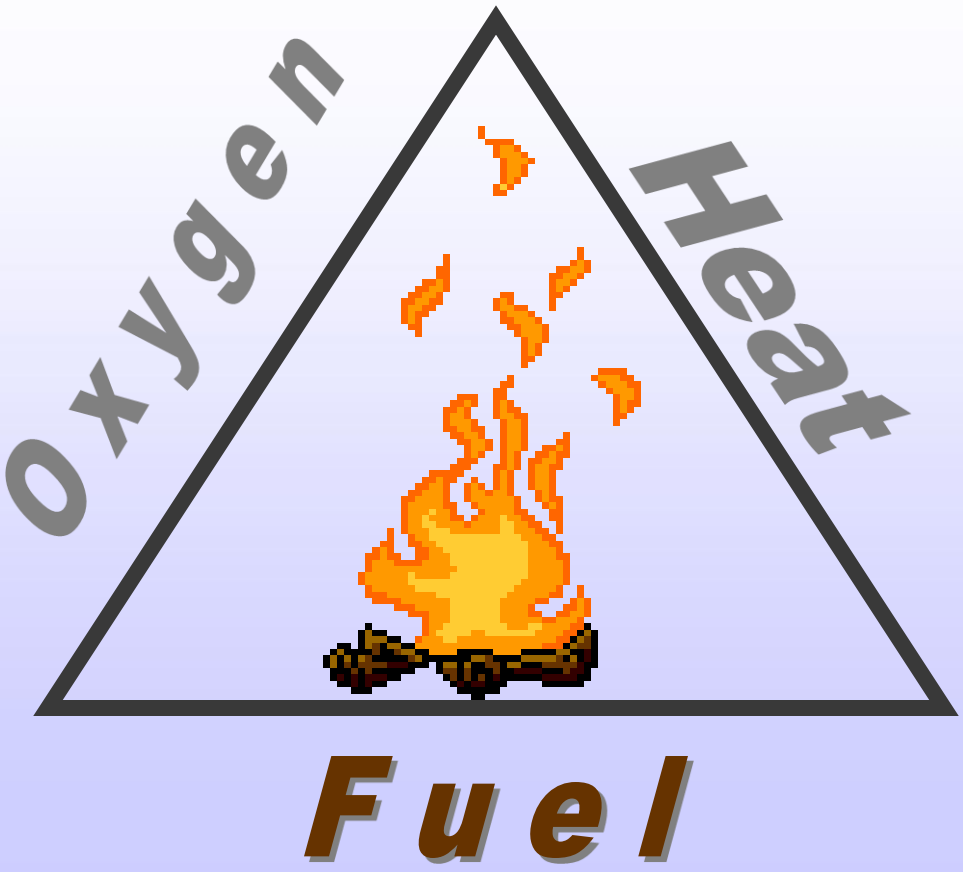

FIRE SAFETY

Definition

FIRE is a chemical reaction between a flammable or combustible substance and oxygen

… rapid oxidation with the evolution of light and heat

Fire Triangle



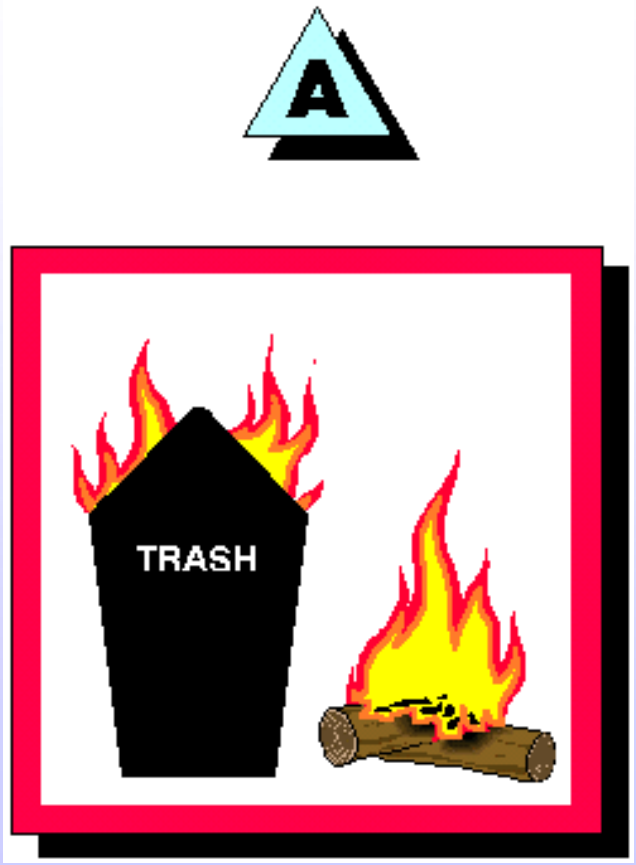
Classification of Fire

Fires are classified by the type FUEL they burn.

The 4 Types are:

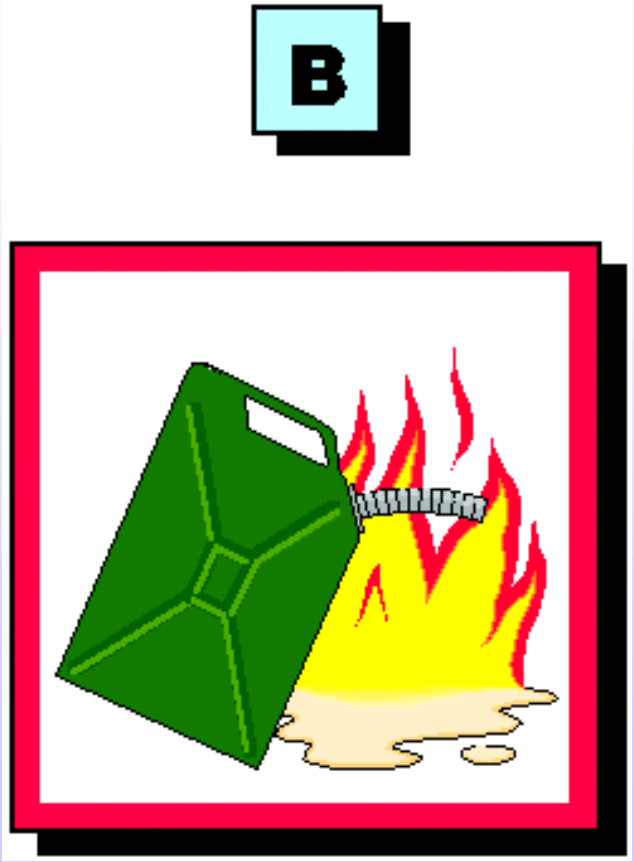
- **Class A**
- **Class B**
- **Class C**
- **Class D**

Class A:
Ordinary Combustibles



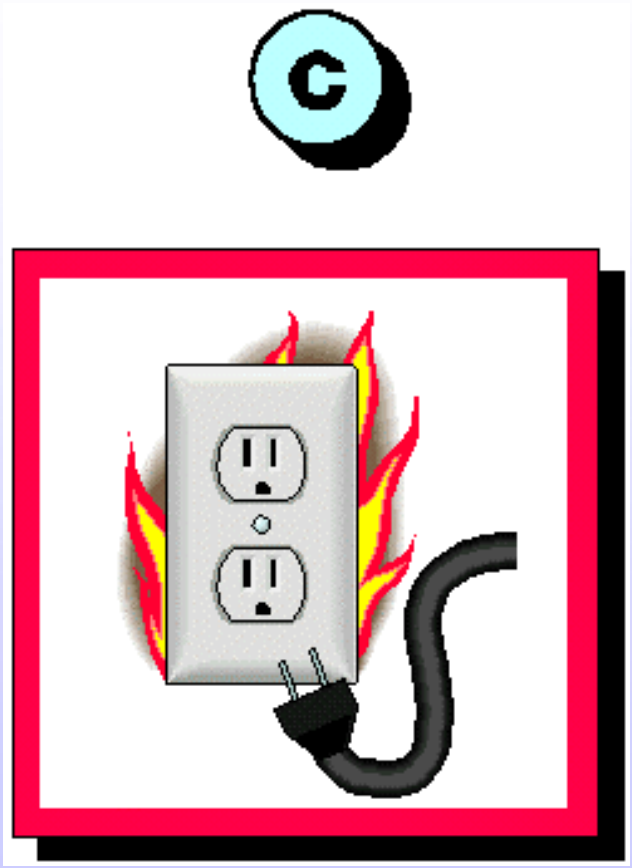
- Wood
- Paper
- Plastic
- Rags

Class B: Surface Fire



- Gasoline
- Oil
- Grease
- Paint

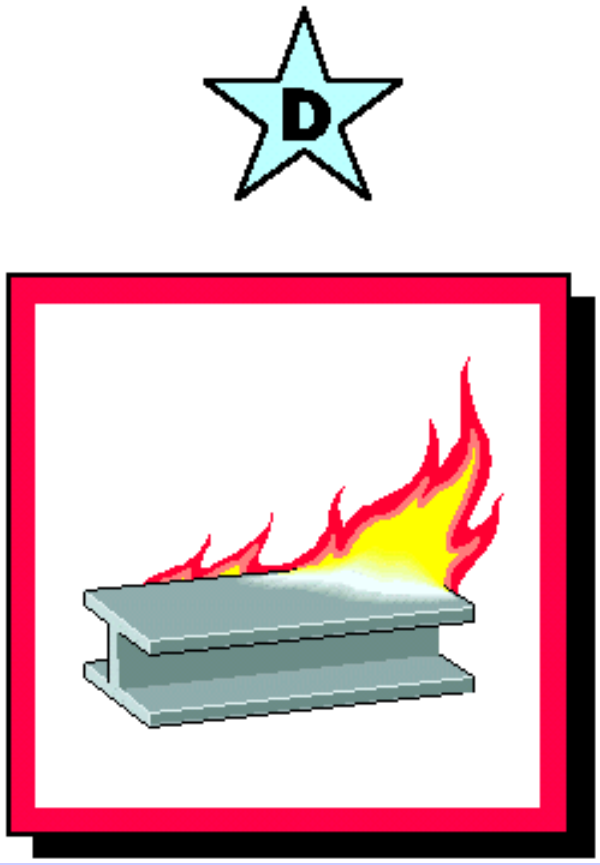
Class C: Electrical Fire



Electrical Fires

- Office Equipment
- Motors
- Switchgear
- Heaters

Class D: Combustible Metals



Metals

- Potassium
- Sodium
- Aluminum
- Magnesium

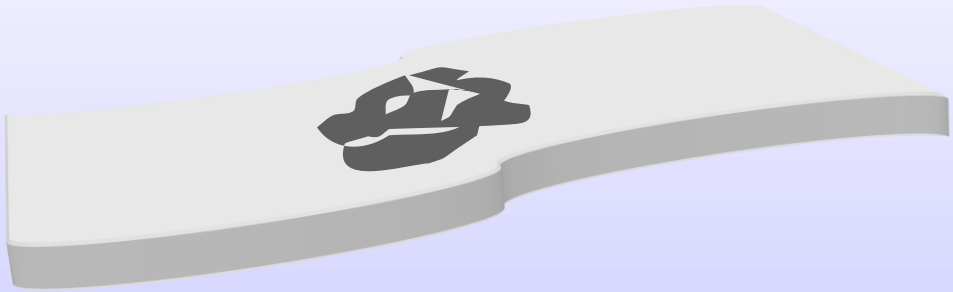
Fire Prevention and Control

PRINCIPLES

Stages of Fire

Understanding How Fire Starts

(1) Incipient Stage

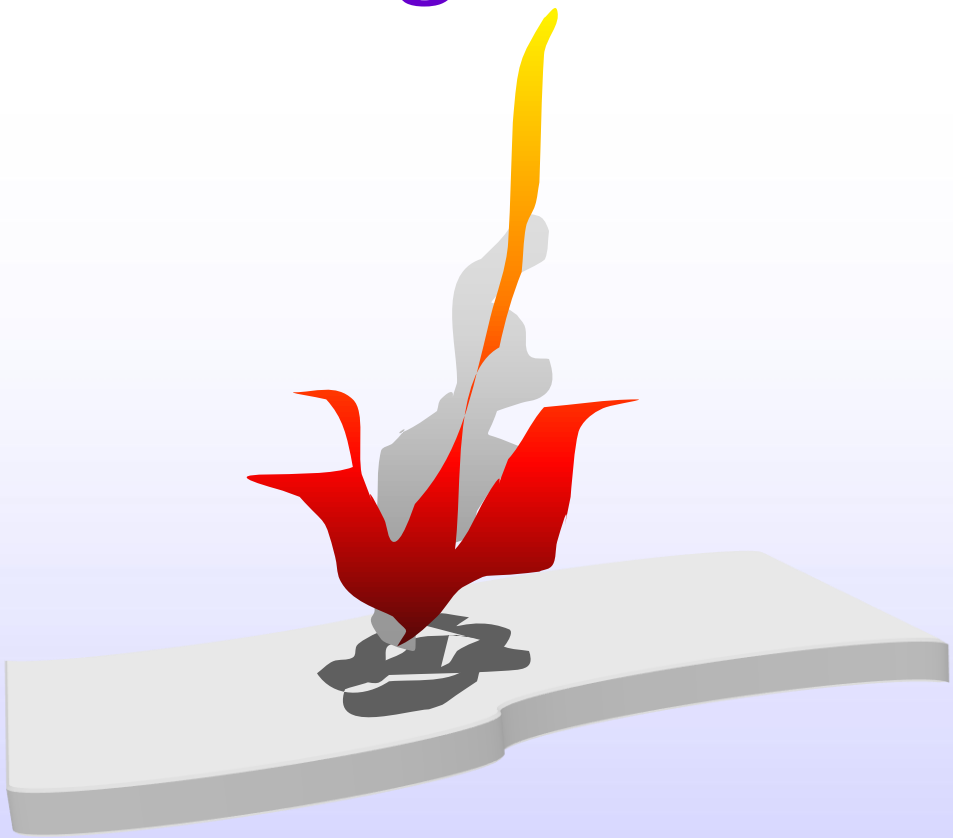


There is no visible smoke or flame.

(2) Smoldering Stage

There is smoke but no flame.

(3) Flame Stage



There is smoke and flame.

(4) Heat Stage

There is uncontrolled superheated air.

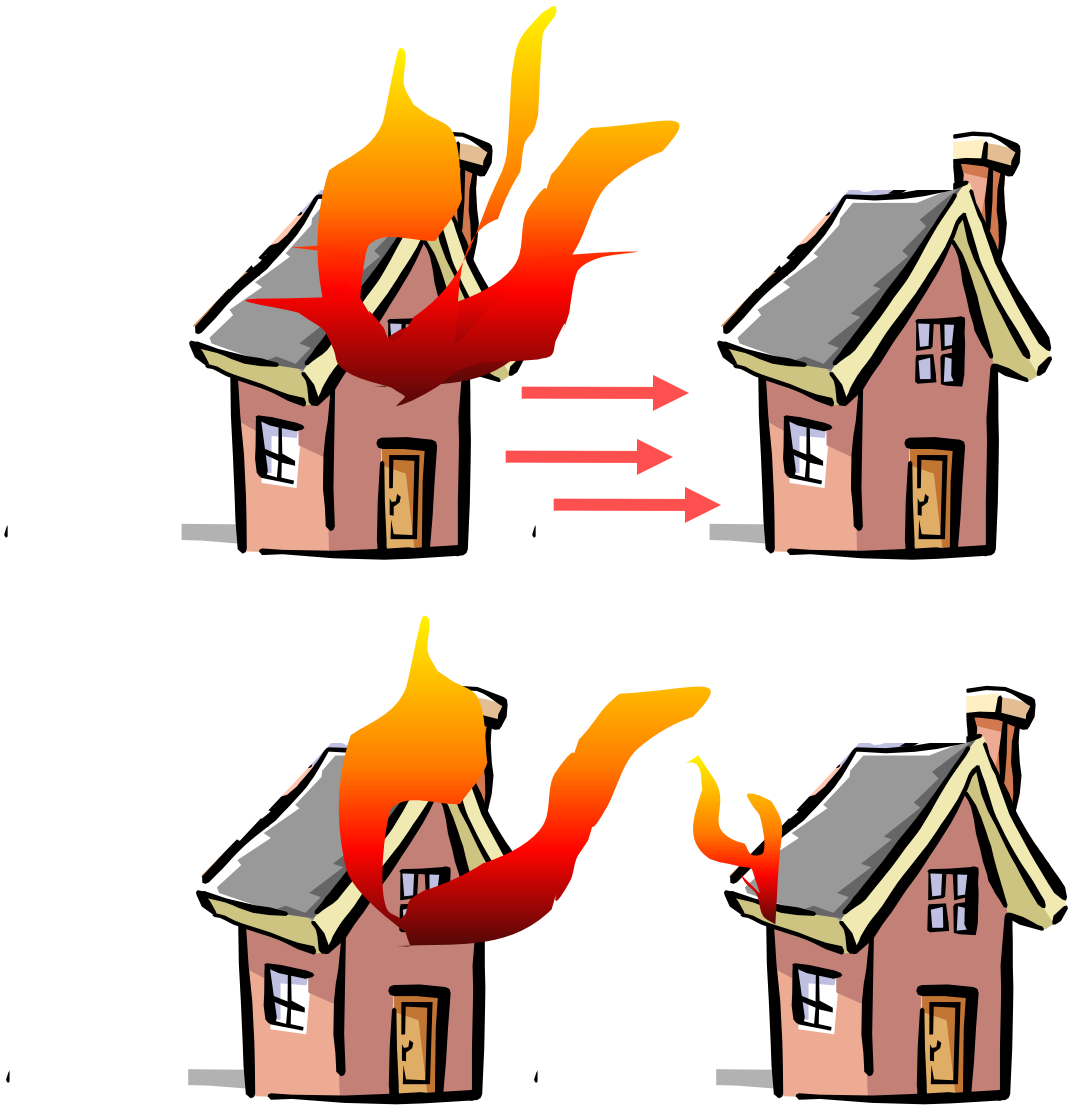
Alarms

- **Automatic Alarms**
  - Smoke Detectors
  - Heat Detectors
  - Light Radiation/Flame Detectors
- **Manual Alarms**
  - Shall be located within 61m travel distance from any point of the building

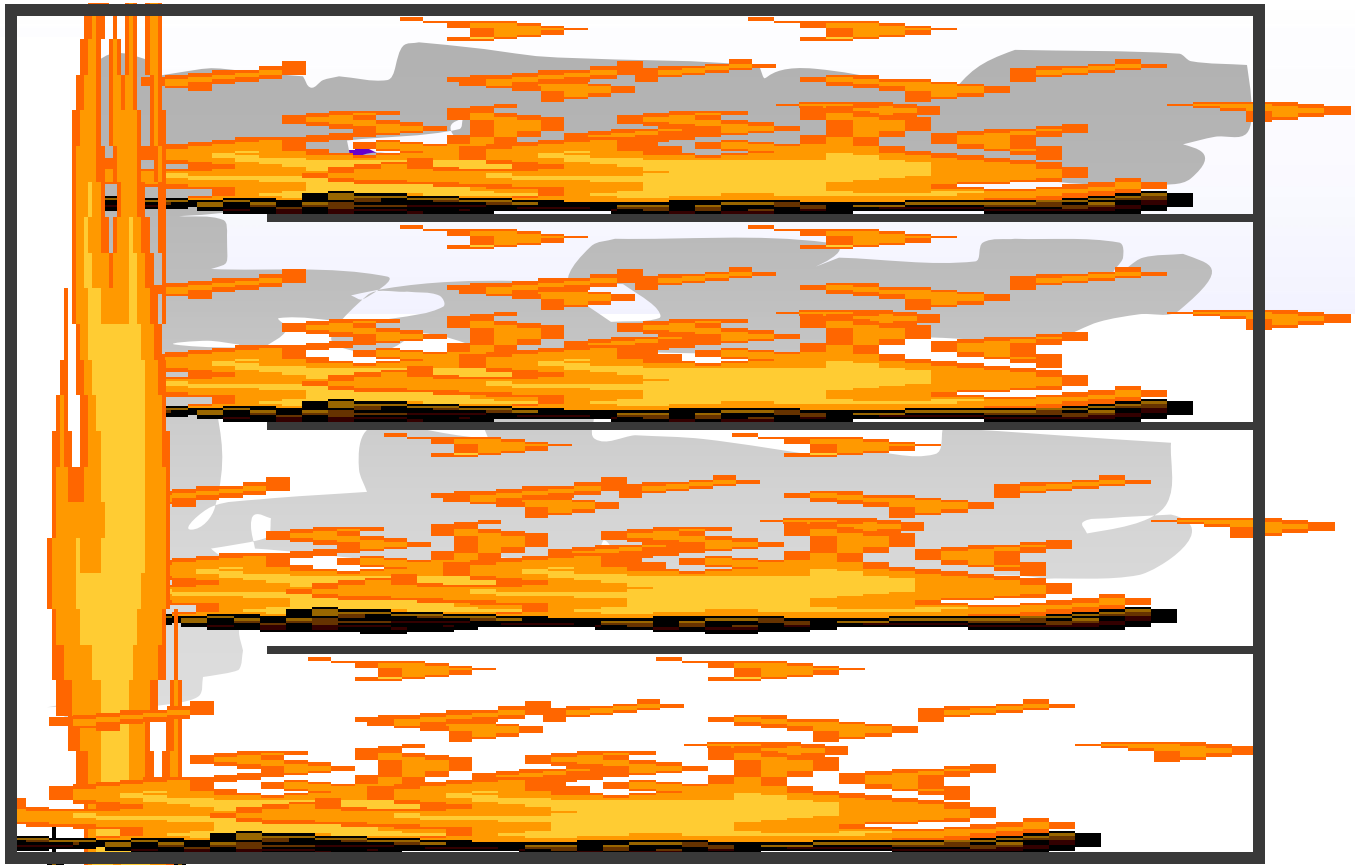
Methods of Spread of Fire

Understanding How Fire Spreads

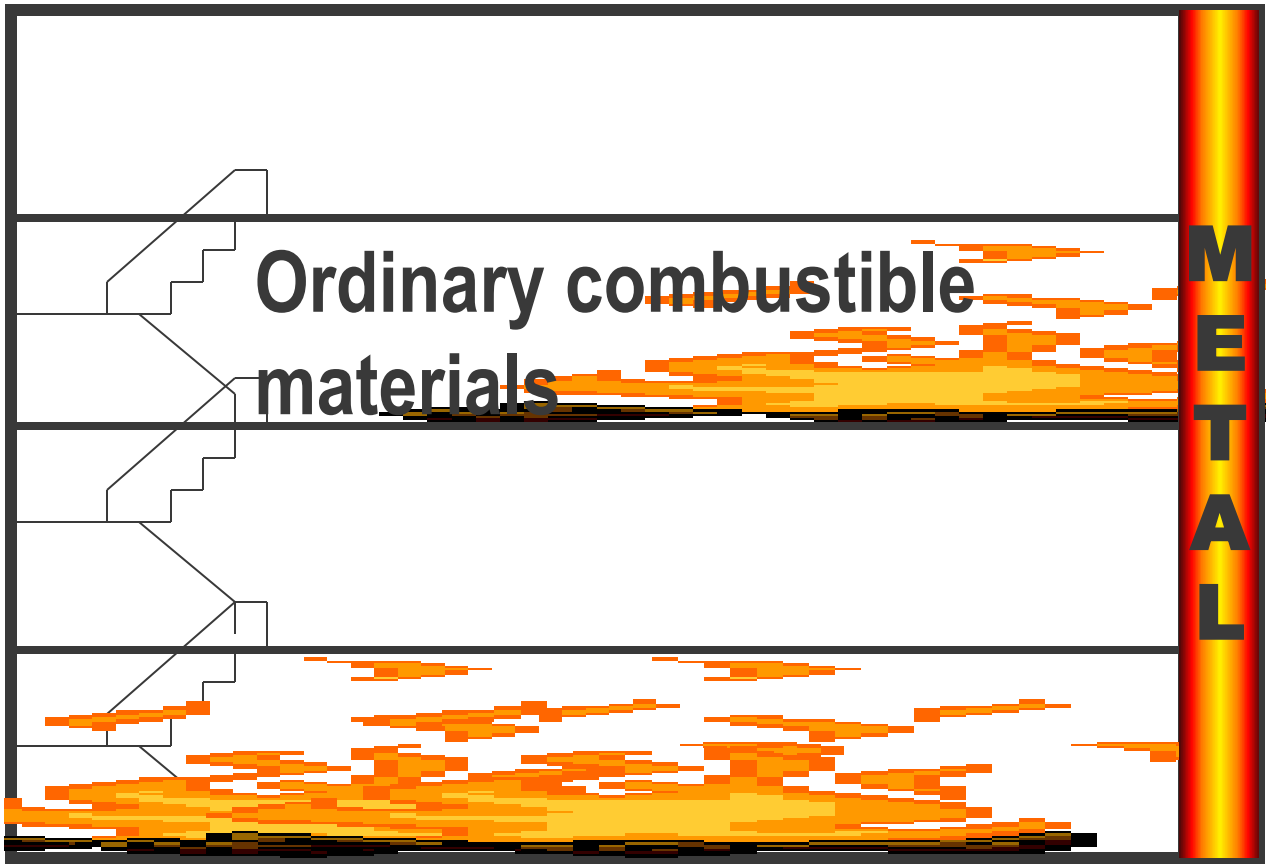
Heat Transfer by Radiation



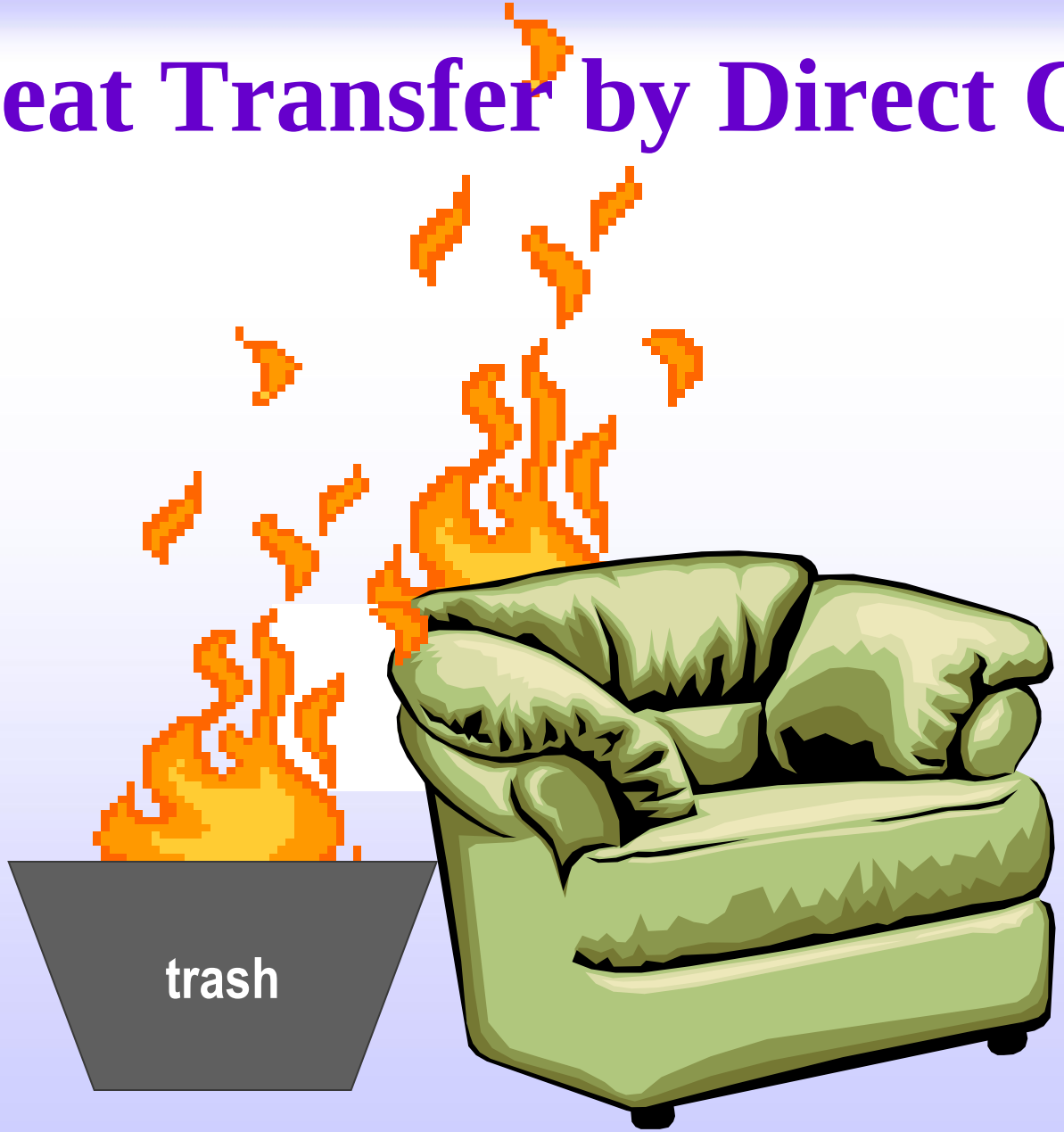
Heat Transfer by Convection



Heat Transfer by Conduction



Heat Transfer by Direct Contact



Methods of Extinguishing Fire

Understanding How Fire Can Be Stopped

Blanketing or Smothering
(Exclusion of Oxygen)

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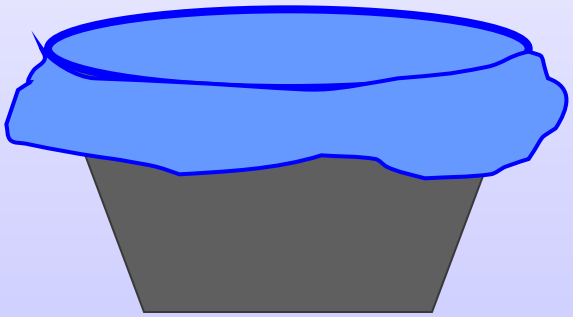
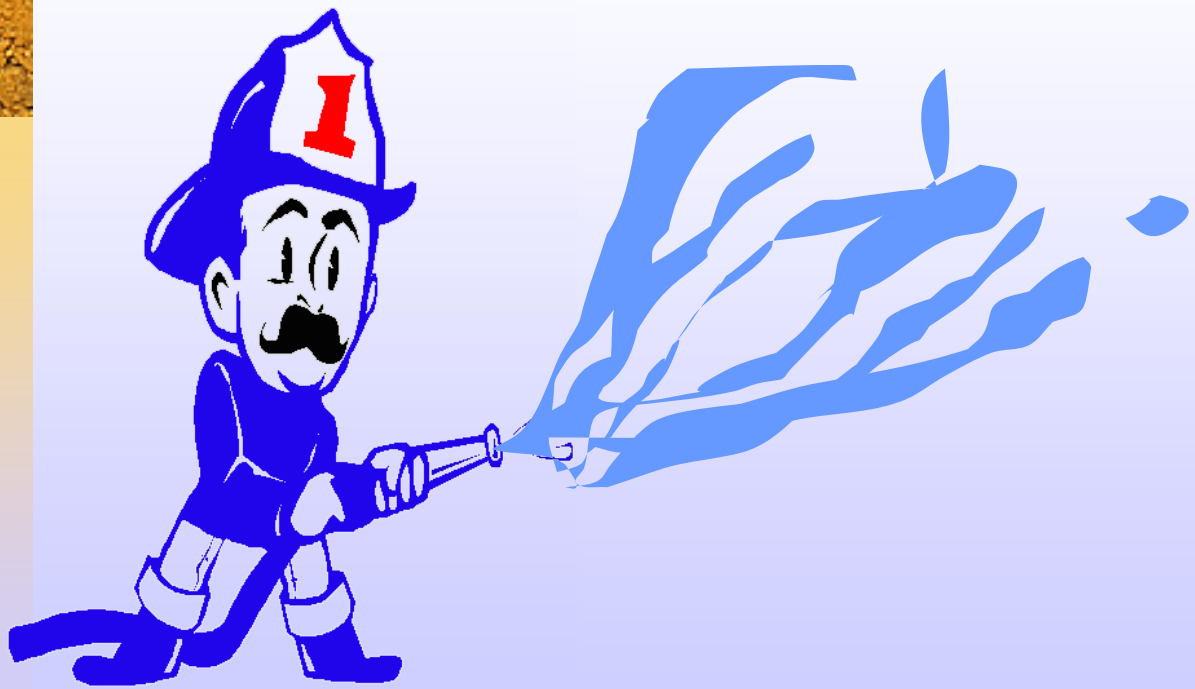
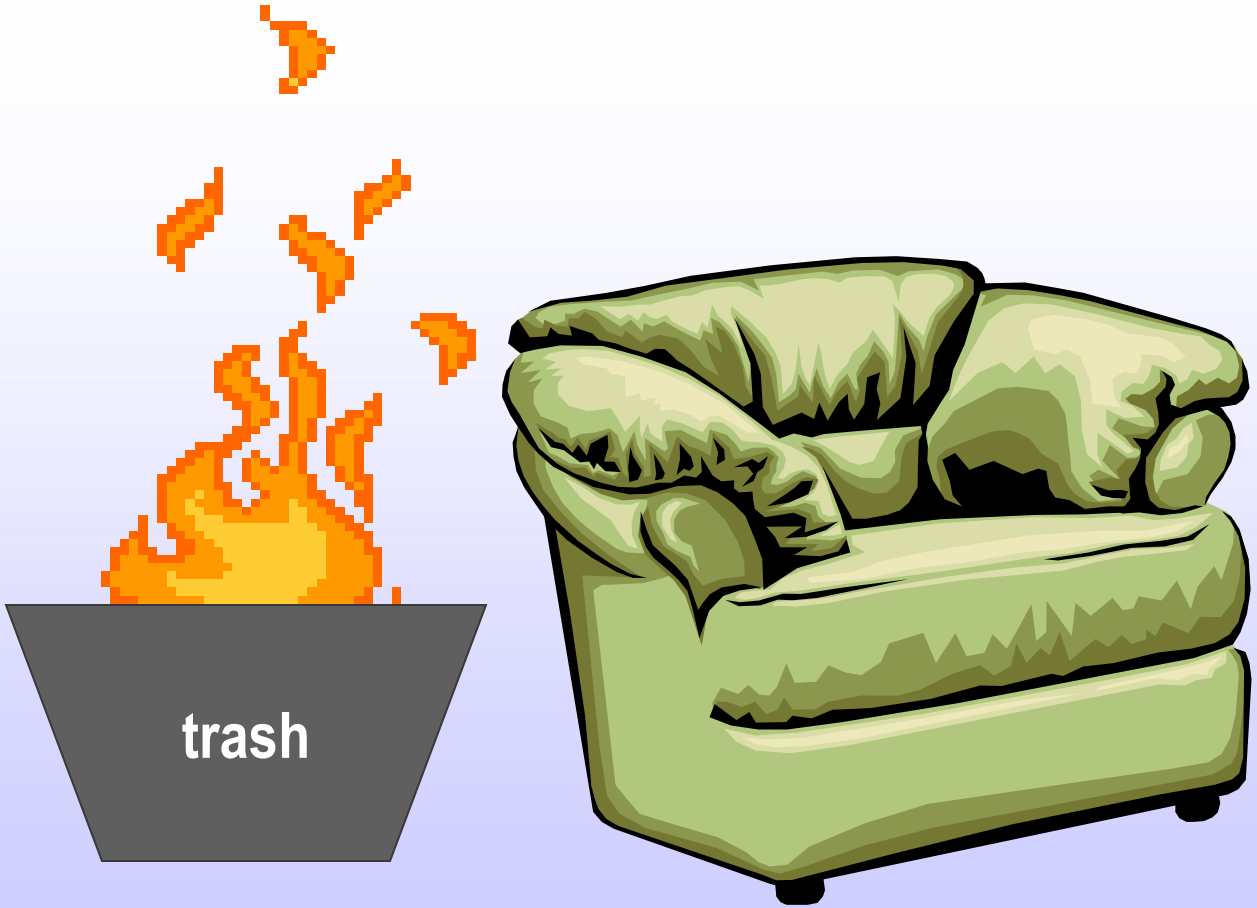
(Exclusion of Oxygen)



Cooling or Quenching
(Reduction of Heat)



Removal of Fuel
(Elimination of Fuel)



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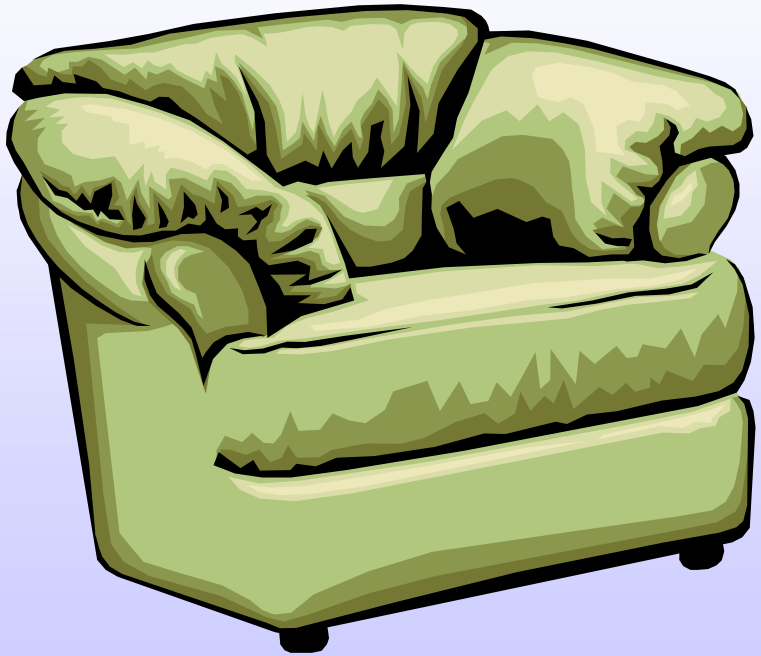
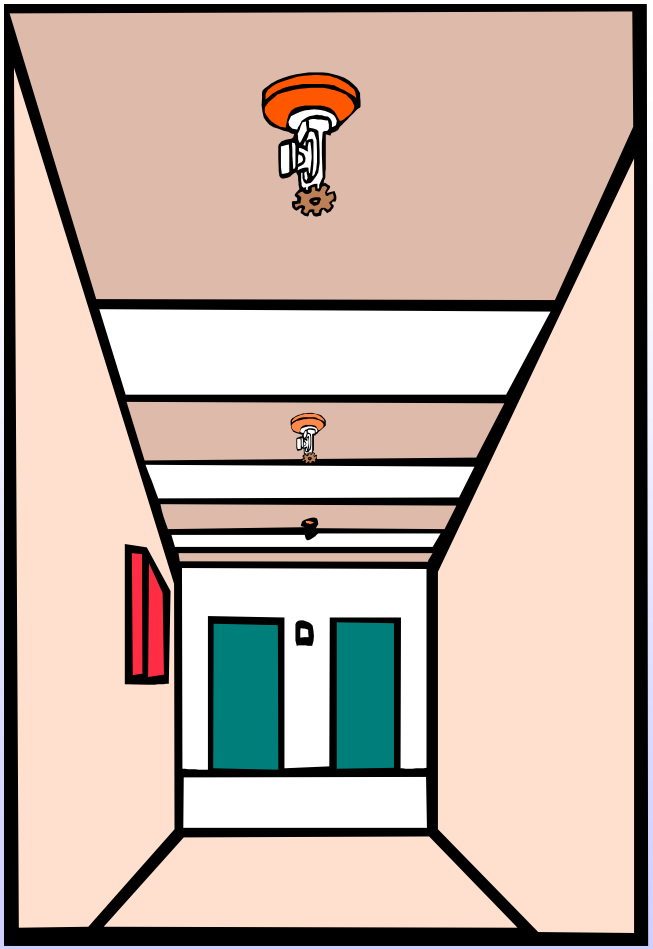


Use of Fire Extinguishers

Fire Extinguishers

- Permanent
  - Standpipe and hose
  - Sprinkler System
  - Automatic extinguishing system
- Portable



Classes of Portable Fire Extinguishers

Portable Fire Extinguishers

DRY CHEMICAL (POWDER)

- Suitable for Class A, B, and C fires
- Red color

CARBON DIOXIDE (LIKE DRY ICE)

- Suitable for Class B and C fires
- Red color

Portable Fire Extinguishers

BROMOCHLORO FOMETHANE (BCF) OR HALON 1211

- Vaporizing liquid
- Suitable for Class A, B, and C fire
- Yellow color

AQUEOUS FILM FORMING FOAM (AFFF)

- Suitable for Class A and B fires
- Blue color

Portable Fire Extinguishers

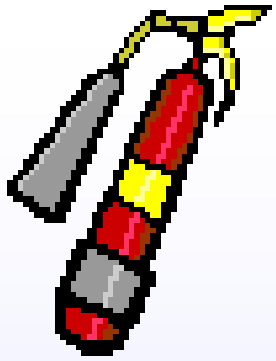
PRESSURED WATER – LIGHT WATER

- Suitable for Class A fire only
- Stainless container or tank

ENVIRONMENT FRIENDLY
HYDROCHLOROFLOUROCARBON (HCFC-123)

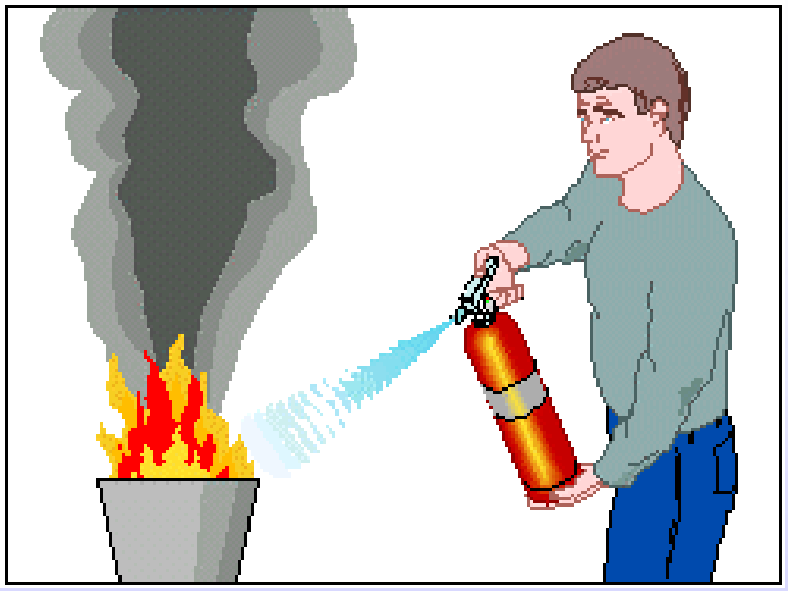
- Vaporizing liquid
- Suitable for Class A, B, and C fires
- Green color

Requirement Portable Fire Extinguisher



- Of Approved Type
- The Right Type for the Class of Fire
- Accessibly Located
- Maintained in Operating Condition
- Operable by Trained Personnel

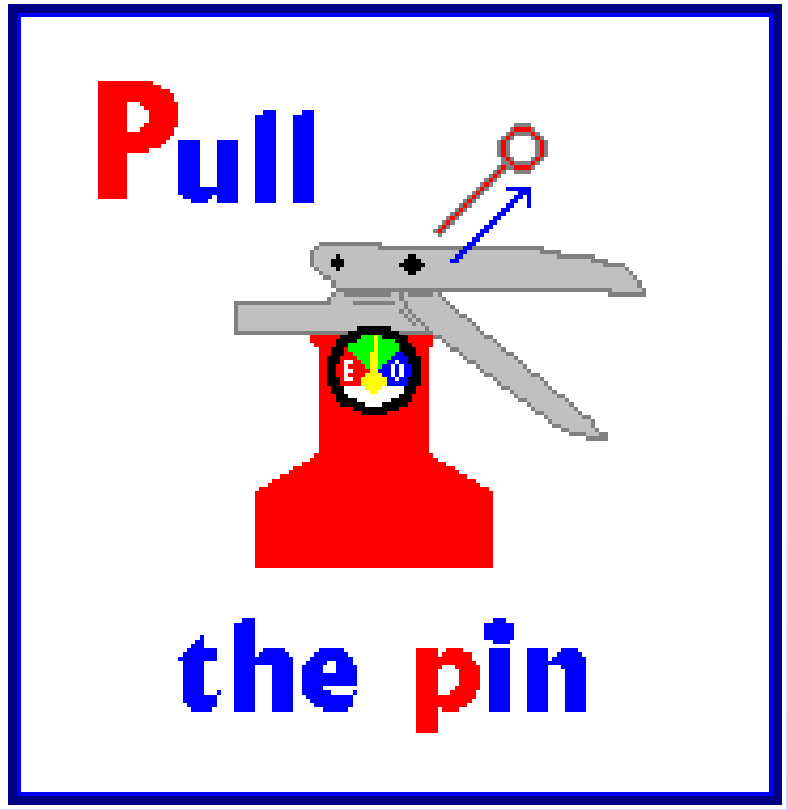
Using Portable Fire Extinguishers



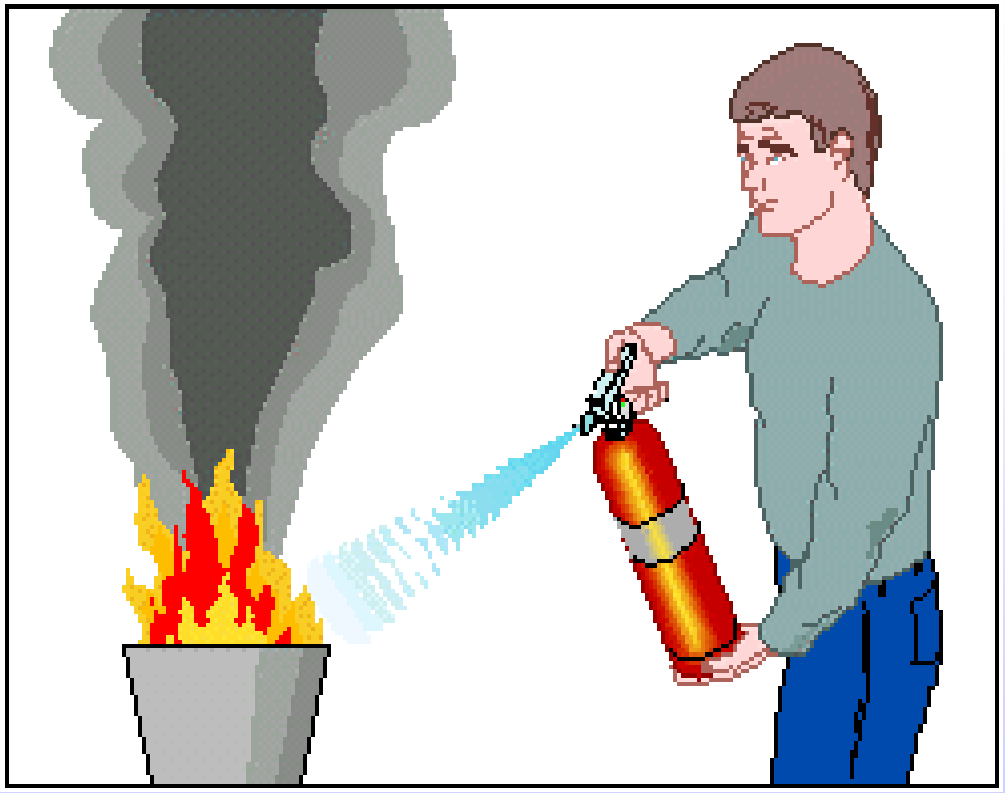
Use the *PASS* -word

1. Pull the Pin

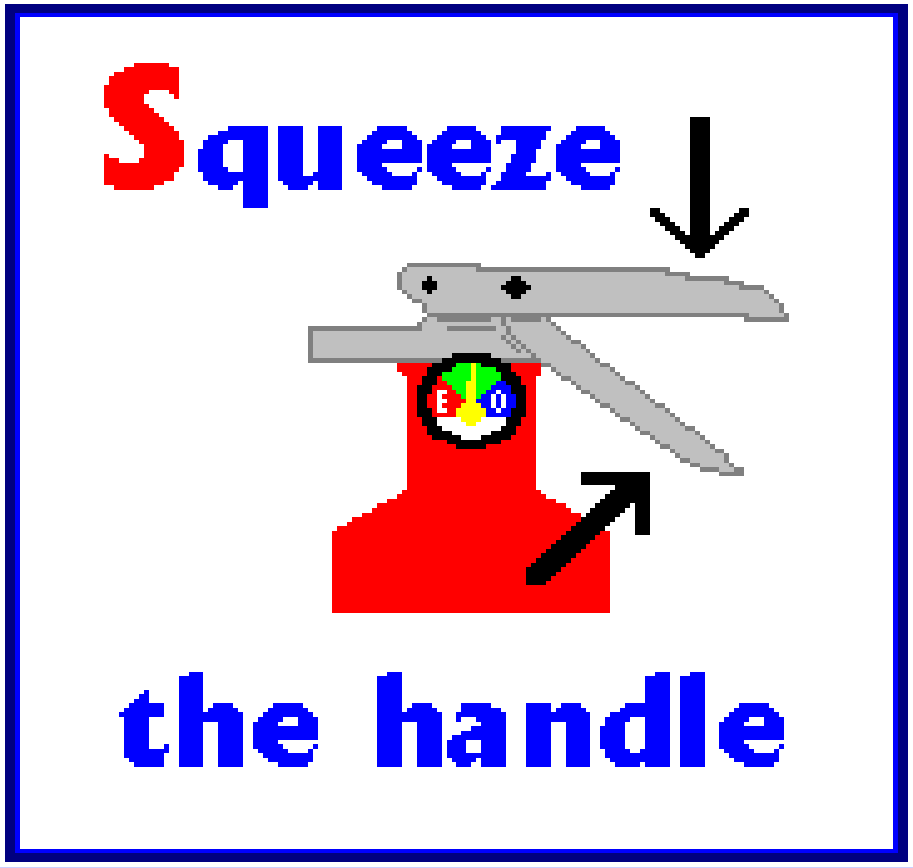
This will allow you to discharge the extinguisher.



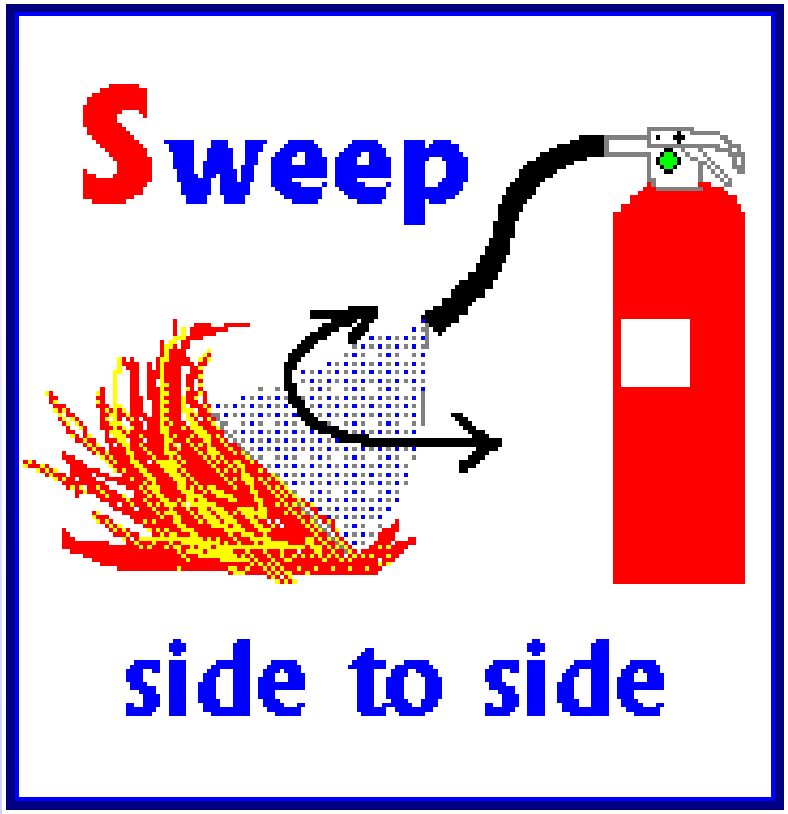
2. Aim at the Base of the Fire



3. Squeeze the Lever/Handle



4. Sweep



Sweep from side to side until the fire is completely out.

In Case of Fire, Think…

S OUND THE ALARM

A DVISE THE FIRE BRIGADE AND CALL THE FIRE DEPARTMENT

F IGHT THE FIRE

E VACUATE THE AREA

Transmitting a Fire Alarm

1. Kind of Fire
2. Location of Fire
3. Name of Caller
4. Telephone Number

What To Do When There is Fire

1. Follow evacuation routes
2. Use stairways, not elevators
3. Walk, NEVER RUN.
4. Stay close to the ground where there is air
5. Test doors
6. Close the door behind you

Rules for Fires

REMEMBER!

- Fires are very dangerous
- Be certain that you will not endanger yourself or others when attempting to put out a fire.

Fire Rules

NEVER fight a fire if…

- **You don't know what is burning**
- **The fire is spreading rapidly**
- **You don't have adequate or appropriate equipment**
- **You might inhale toxic smoke**
- **Your instincts tell you not to.**

Fire Rules

The final rule…

Always position yourself
with an exit or means of escape
at your back
BEFORE you attempt
to use an extinguisher to put out a fire.

THE END

….ANY QUESTIONS?