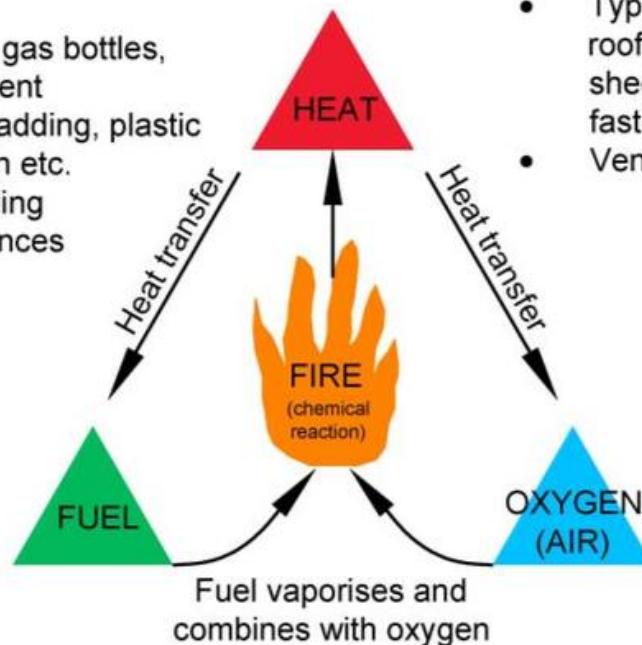


Fire Science-Triangle & Classes
Personnel Safety & Accountability
PPE Donning

Fire Science-Triangle (fire tetrahedron)

Fuel sources:

- Furniture
- Paraffin stoves, gas bottles, cooking equipment
- Timber walls, cladding, plastic layers, insulation etc.
- Clothing & bedding
- Electrical appliances etc.



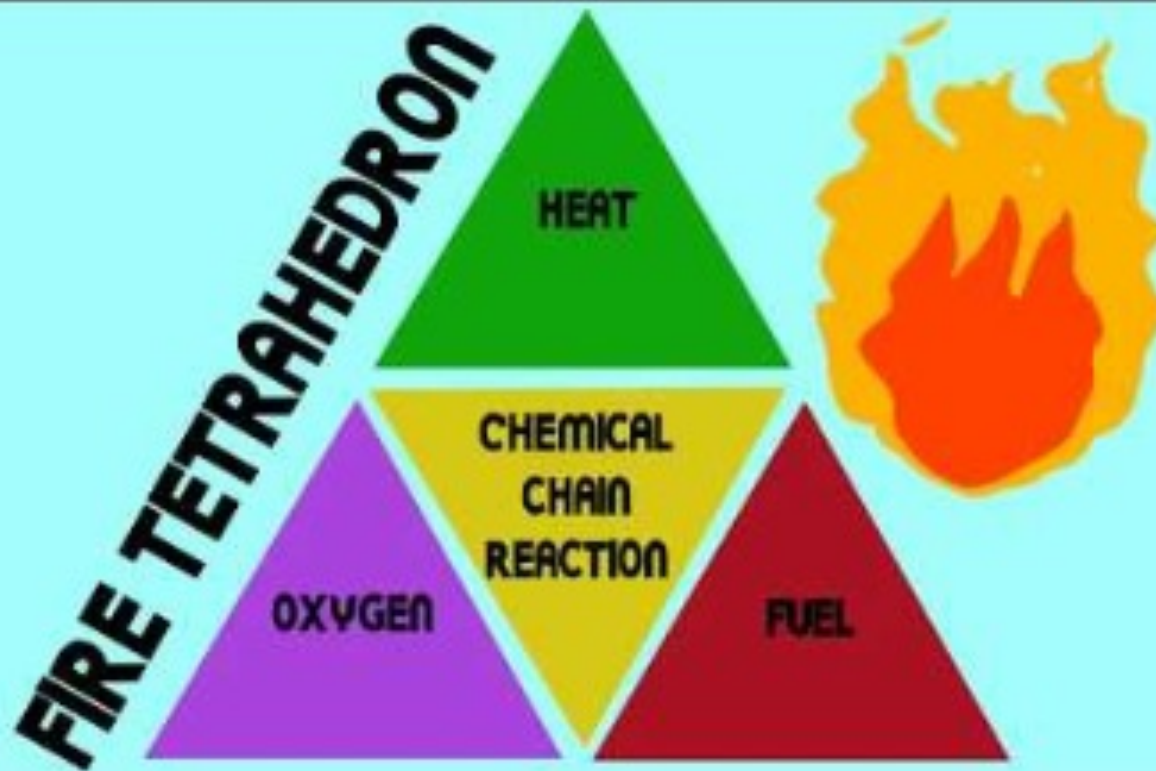
Influences on heat retained:

- Type and thickness of walls and roof construction. Thin steel sheets allow heat to radiate out faster than timber boards.
- Ventilation as below.

Influences on ventilation:

- Number and position of doors & windows.
- Spaces between floors, walls and roof.
- Changes occur due to windows breaking, walls opening, people intervening, structure collapse etc.

fire Tetrahedron



https://www.youtube.com/watch?v=48iloyfN--M&feature=emb_logo

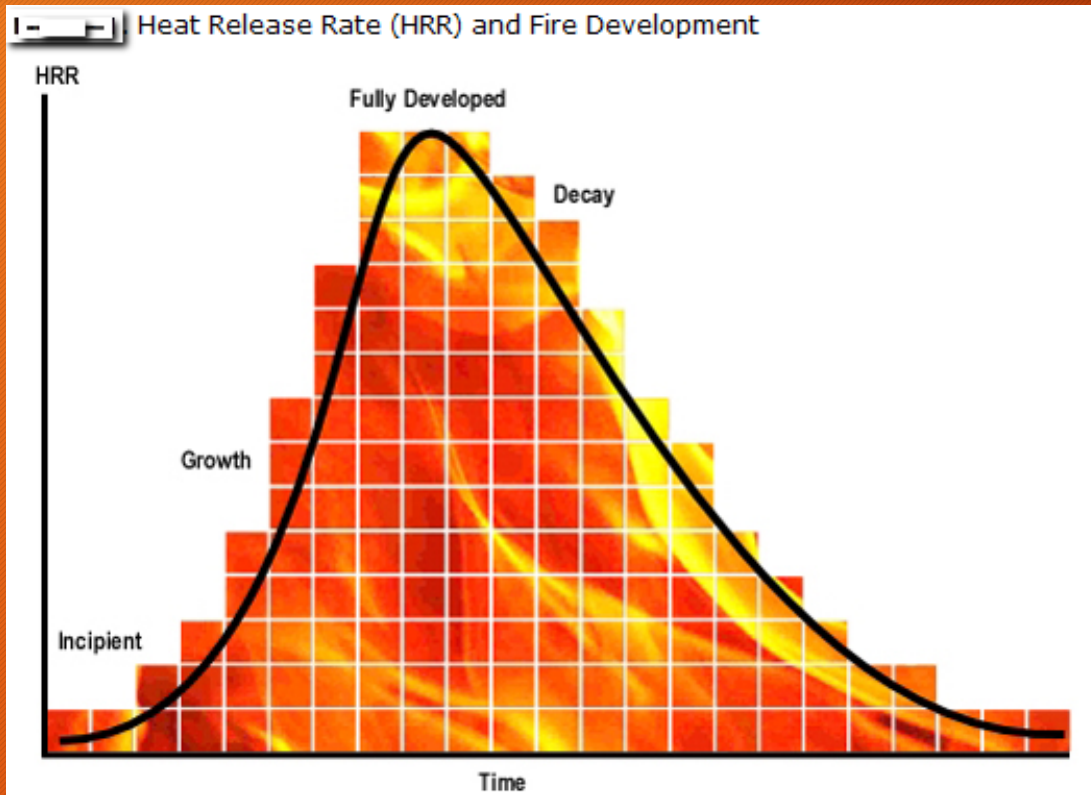
Back draft - Oxygen starved fire



https://www.youtube.com/watch?v=KjAXtsQI_kc&feature=emb_logo



4 stage of a fire



4 stage of a fire



<https://www.youtube.com/watch?v=2qMQ9nmX4LQ&feature=youtu.be>

Then verse Now. The rate that content burns

Comparison of Room Furnishings

Legacy Room



Modern Room













03:19







Underwriters
Laboratories

https://www.youtube.com/watch?v=mulnwTNhV6Q&feature=emb_logo

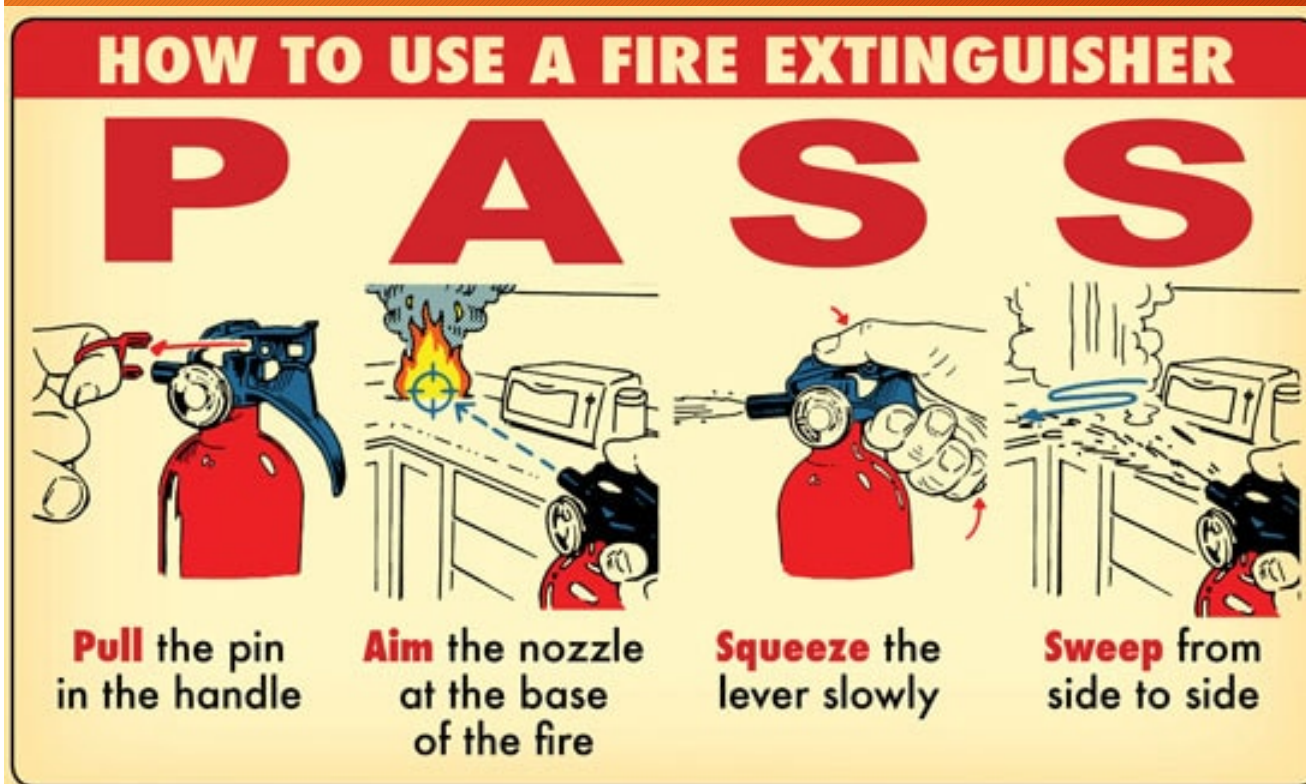
Classes of Fire

		Ordinary Combustibles	Wood, Paper, Cloth, Etc.
		Flammable Liquids	Grease, Oil, Paint, Solvents
		Live Electrical Equipment	Electrical Panel, Motor, Wiring, Etc.
		Combustible Metal	Magnesium, Aluminum, Etc.
		Commercial Cooking Equipment	Cooking Oils, Animal Fats, Vegetable Oils

Fire Extinguisher types

Fire Extinguisher Chart						
Extinguisher		Type of Fire				
Colour	Type	Solids (wood, paper, cloth, etc)	Flammable Liquids	Flammable Gasses	Electrical Equipment	Cooking Oils & Fats
	Water	✓ Yes	✗ No	✗ No	✗ No	✗ No
	Foam	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes
	Dry Powder	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No
	Carbon Dioxide (CO2)	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes

How to use a Fire extinguisher



Fire Extinguisher: How to use



<https://youtu.be/Lg-vibNXNkw>

Donning and Doffing Gloves



<https://youtu.be/KHR5do-b7zY>

Accountability

- Firefighter Accountability Tags.
 - 2 Velcro tabs on your helmet.
 - Turn it in when arriving at the scene, you keep the other one.
 - Used to track who is on the fire ground and what/where they are by CP.
 - MAKR SURE you take it back before leaving the scene.
- Incident Command Board
- PAR
 - Personnel **Accountability** Report
 - Do you have visible or physical contact with everyone in your crew.

URGENT

- **Urgent** is used to signal a serious situation that has the potential to either endanger the safety of operating members, or significantly impact fire ground operations
 - Attach1:Urgent, urgent, urgent; attach 1
 - Command: command on for attach 1
 - Attach1: Low pressure on red attach line, need more pressure!

MAYDAY

- MAYDAY is when Fire Rescue Personnel require. immediate rescue from hazardous situations
- LUNAR
 - L-Location
 - U-Unit
 - N-Name
 - A-Assignment and Air Supply
 - R-Resources Needed
 - <https://www.firerescue1.com/firefighter-training/videos/fireground-flash-tip-calling-a-mayday-yuHBxpU3z2Gxyh9I/>
- FF:MAYDAY, MAYDAY, MAYDAY
- Command: on For MAYDAY
- FF:3rd floor A/B corner, attach 1, FF Bernstein, Low air trap by fire, Ladder to window, Bailing out.