Objectives

- Understand basic firefighting concepts:
  - R.A.C.E.
  - P.A.S.S.
- Know what to do if you find a fire
- Be able to correctly and safely select and use a fire extinguisher
How Does a Fire Work?

- Three components
- Need all three components to start a fire
- Fire extinguishers remove one or more of the components

Class A Ordinary Combustibles

- Trash
- Wood
- Cloth
- Paper
- Rubber
- Plastics
Class B Flammable Liquids
- Gasoline
- Oil
- Grease
- Tar
- Oil-based paint
- Lacquer
- Flammable gases

Class C Electrical
- Energized electrical equipment
Class D Combustible Metals

- Magnesium
- Sodium
- Potassium
- Titanium
- Zirconium
- Other flammable metals

Fire Extinguisher Types

PRESSURIZED WATER

- Class “A” fires only.
- 2.5 gal. water – approximately 1 minute discharge time
- Range 30 – 40 feet
Fire Extinguisher Types (cont.)

CARBON DIOXIDE (CO₂)

- Class “B” or “C” fires
- 2.5-100 lb. 8 - 30 seconds discharge time
- Range 3-8 ft.

Fire Extinguisher Types (cont.)

MULTIPURPOSE DRY CHEMICAL

- Class “A”, “B”, or “C” fires
- 2.5-20 lb. dry chemical 8-25 seconds discharge time
- Range 5-20 ft.
Fire Extinguisher Types (cont.)

HALON

- Class "A", "B", or "C" fires
- 9-17 lb. Halon 1211 8-18 seconds discharge time
- Range 9-16 ft.
- Fumes toxic if inhaled
- Halon is no longer manufactured

Fire Extinguisher Types (cont.)

COMBUSTIBLE METAL

- Class "D" combustible metal fires only.
- 30 lb. pressurized dry powder optimized for specific combustible metal
- Range 6-8 ft.
- To activate, must first open nitrogen cylinder on back to pressurize body
## Extinguisher Types Summary

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<tr>
<td>Combustible Metal</td>
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## Fire Extinguisher Anatomy

- **Discharge Hose**
- **Discharge Nozzle**
- **Discharge Lever**
- **Discharge Locking Pin and Seal**
- **Carrying Handle**
- **Data Plate**
- **Body**
- **Pressure Gauge** (not found on CO₂ extinguishers)
Fire Emergency Response Procedures

- Rescue
- Alarm
- Contain
- Extinguish

Before you fight the fire

- Ensure area is evacuated
- Always sound the alarm regardless of fire size
- Know locations of extinguishers in your area and how to use them
- Know department emergency procedures and evacuation routes
Criteria for fighting the fire

- Fire is *small* and *contained*
- You have safe egress (EXIT) route (can be reached *without* exposure to fire)
- Available extinguishers are rated for size and type of fire

When fighting the fire remember

- To keep an exit to your back
- When the fire extinguisher is empty - Get out!
- When you leave the building do not go back in!
When not to fight a fire when

- Fire has spread beyond its point of origin
- Your escape path is threatened
- The area is smoke filled
- Your instincts tell you GET OUT

How to Use a Fire Extinguisher
Fighting the Fire

**P**ull the pin

**A**im low at the base of flames

**S**queeze the handle

**S**weep side to side

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P.A.S.S. Method

**Pull the pin**

This will allow you to squeeze the handle in order to discharge the extinguisher.
**P.A.S.S. Method**

**Aim at the base of the fire**

Aiming at the middle will do no good. The agent will pass through the flames.

**Squeeze the handle**

This will release the pressurized extinguishing agent.
**P.A.S.S. Method**

**Sweep**

Sweep side to side

Cover the entire area that is on fire. Continue until fire is extinguished. Keep an eye on the area for re-lighting.

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**Summary**

- Fire Triangle (Combustion Process)
- Class A, B, C, D, fires
- Types of portable fire extinguishers
- Basic firefighting concepts:
  - R.A.C.E.
  - P.A.S.S.
- Before you fight the fire
- Criteria for fighting the fire
- When not to fight a fire