Fire Safety

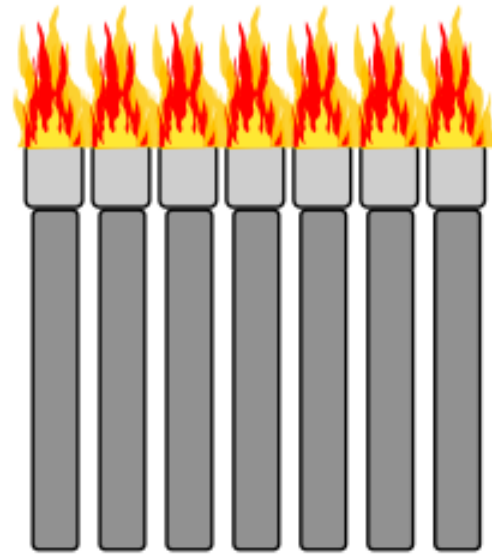
Presentation Objectives

- To educate participants on how to avoid fires and fire related injuries.
- To create awareness of fire deaths and injuries and their common causes.
- To inform participants of their personal responsibility toward fire safety and injury prevention.

THE MECHANICS OF FIRE
Continued

☑ **IGNITION CAN BE:**

- ✓ **Electrical.**
- ✓ **Chemical.**
- ✓ **Thermal.**
- ✓ **Radioactive.**



THE MECHANICS OF FIRE
Continued

☑ **FUEL CAN BE:**

- ✓ **Solid.**
- ✓ **Liquid.**
- ✓ **Gas.**

In order to combust the right mixture of oxygen and fuel must be present.

SOLID **LIQUID** **GAS**

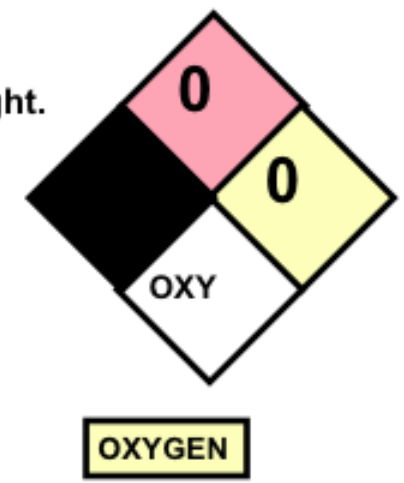
Three Phases of Fire

- Incipient
  - Oxygen content in air not reduced
- Hot smoldering
  - Flame may cease to exist if area is airtight
  - Burning reduced to glowing embers
  - Dense smoke fills the room
- Free-burning

THE MECHANICS OF FIRE
Continued

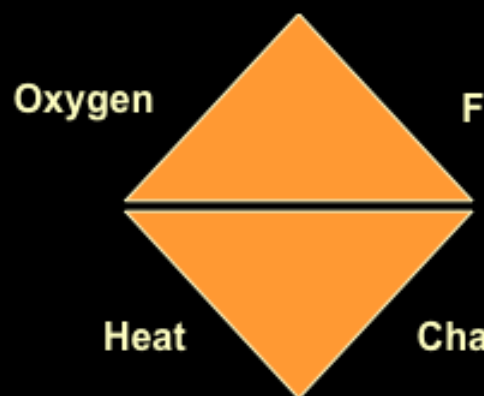
☑ **OXYGEN:**

- ✓ **The fuel air mixture must be right.**
- ✓ **People need 19 percent to live.**
- ✓ **Fire only needs 16 percent.**



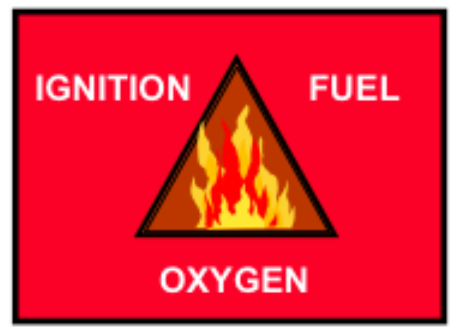
Fire Tetrahedron

- Triangle is out…. Tetrahedron is in…
- Consists of 4 Sides



THE MECHANICS OF FIRE

☑ **THE FIRE TRIANGLE:**



TAKE ANY COMPONENT AWAY AND FIRE CANNOT SURVIVE

Types Of Fires

- Class A
  - wood, cloth, paper, cardboard
- Class B
  - flammable or combustible liquids, gases
- Class C
  - energized electrical equipment
- Class D
  - combustible metal

Combustion

- Chemical reaction between
  - Combustible material (fuel)
  - Oxygen
  - Ignition source
- Rapid oxidation of combustible material accompanied by a release of energy in the form of heat and light