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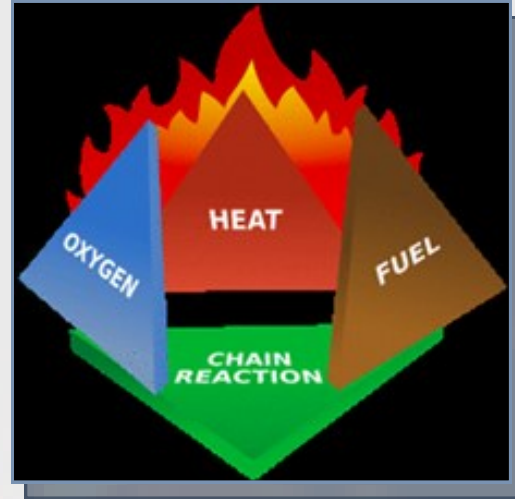
CPOST

Fire Safety

On-the-Job Training

The Fire Tetrahedron

For many years the concept of fire was symbolized by the Fire Triangle which represented three elements: fuel, heat, and oxygen. Further fire research determined that a fourth element, the chemical chain reaction, was a necessary component of fire.



The Fire Triangle was changed to the Fire Tetrahedron to reflect this fourth element.

Essentially, all four elements must be present for fire to occur: fuel, heat, oxygen, and a chemical chain reaction. The chemical chain reaction provides the heat necessary to maintain the fire. Removal of any of these essential elements will result in the fire being extinguished.

The four elements are oxygen to sustain combustion, sufficient heat to raise the material to its ignition temperature, fuel or combustible material and subsequently and exothermic chemical chain reaction in the material. Each of the four sides of the Fire Tetrahedron symbolize the fuel, heat, oxygen, and chemical chain reaction. Fire extinguishers put out a fire by taking away one or more of these elements of the Fire Tetrahedron.

Source: www.nfpa.org

**Commission on Correctional Peace
Officer Standards & Training**