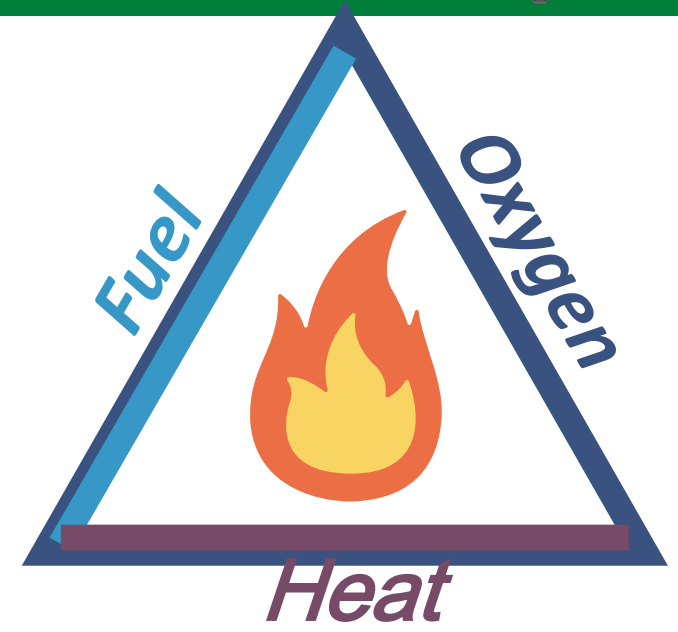


Dust Pentagon

Supervisor
Crew
Talk

*Many people are familiar with the fire triangle, and how there needs to be 3 elements: **oxygen**, **fuel**, and **heat** for a fire to start or continue.*



The dust pentagon is similar, but 5 elements are required for a dust explosion.

The fuel for the explosion is the combustible dust.

Fuel

An oxidant is needed, which is typically the oxygen in the air.

Oxygen

Suspended, dispersed particles in air allow rapid combustion by maximizing contact with oxygen.

Dispersion

The ignition source must be capable of igniting materials when they're in a cloud.

Ignition source



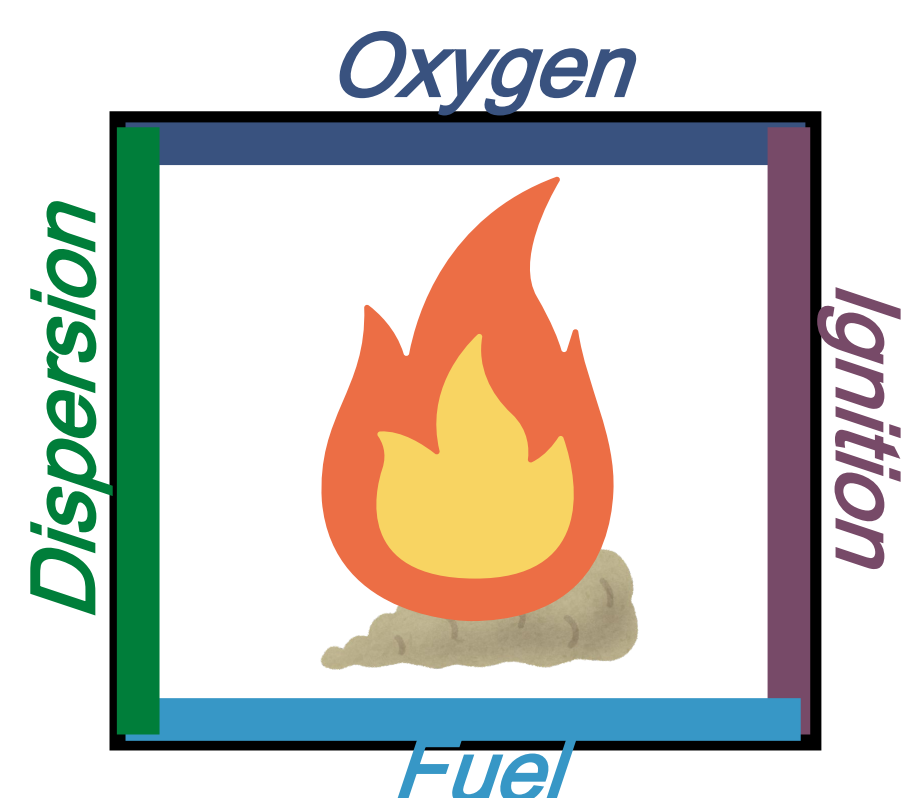
Confinement

Confinement causes lack of movement in the dust particles, which leads them to be suspended in air for extended periods of time. Confinement can happen in large, seemingly open spaces, like rooms or buildings, not just in “confined spaces”.

Only 4 elements are needed for a flash fire:

Oxygen, ignition, fuel, and dispersion.

A flash fire can spread quickly, like an explosion or deflagration, but doesn't create as intense of pressure or sound waves.



“Safety is a core value and business priority”



West Fraser