

“Understanding Fire Behaviour & Fire Growth”

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Why every second matters and why firefighters study the fire curve. Fire evolves fast and conditions can shift from survivable to fatal in moments. Understanding each stage is important for life-saving awareness.

Stage 1: Incipient / Smouldering Stage (This is the quiet beginning but is more dangerous than it appears)

- Toxic gases form immediately even with low heat and fuels begin to break down
- Release of flammable vapours with clear visibility misleading occupants into feeling safe

Remember - Early smoke can incapacitate people long before flames are visible.

Stage 2: Growth Stage (The Most Dangerous Phase where the fire accelerates rapidly)

- Heat release increases as oxygen feeds the flames and flames extend upward and outward
- Superheated gases accumulate at the ceiling and rollover can ignite overhead without warning

Remember - If unchecked, conditions can trigger flashover, where the entire room ignites almost instantly.

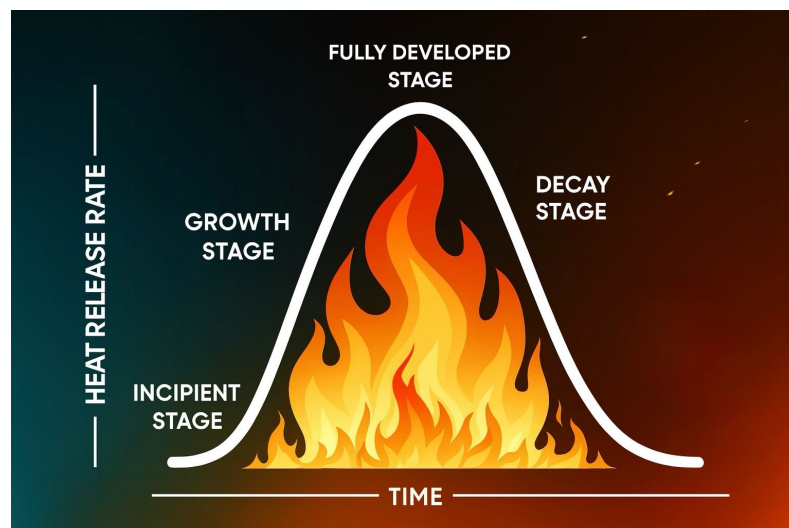
Stage 3: Fully Developed Stage (The fire reaches maximum intensity)

- All available fuel is burning and temperatures hit their peak
- Structural stability becomes severely compromised and collapse risk is at its highest

Stage 4: Decay Stage (The fire weakens but remains extremely hazardous)

- Oxygen and fuel are limited with heat and toxic gases remain trapped
- Introducing fresh air can trigger backdraft or smoke explosion

Remember - Fire behaviour knowledge isn't optional. It is survival.



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