

## **How fire spreads**

### **CONDUCTION**

The principle of conduction involves the transmission of heat through material. In our example a steel beam in the vicinity of a fire has heated. That heat has been transmitted through the metal and has ignited flammable materials elsewhere in the building.

### **RADIATION**

Radiation is the transmission of heat through air and we rely on this principle to warm ourselves in front of an open fire or to dry our clothes on a clotheshorse. The principle works in the spread of fire in a similar way. Heat from the fire is radiated outwards and starts to heat materials in the vicinity, then as shown in our diagram the temperature rises and these can ignite.

### **CONVECTION**

The principle of convection currents and transmission of heat from a fire, are that when air is heated it will become less dense and will rise to the highest point, leaving a vacuum in its place. This vacuum is immediately filled with colder air from the lower level and this creates a circular movement of air.

## **Fire Risk Assessments**

- Stage 1- Identify the fire hazards
- Stage 2 -Identify the people at risk (near hazards, alone, elderly or disabled, sleep in)
- Stage 3 -Evaluate, remove or reduce the risk (remove hazards, add precautions)
- Stage 4- Record, plan, inform, instruct and train (emergency plan, training, record findings)
- Stage 5- Review and revise

## **Responsibilities of a fire marshal**

- Maintain the safety of the building in accordance with risk assessments and emergency planning
- Check fire exits and alarms
- Assist in clearing the building in the event of a fire
- Checking the area or floor are clear
- Completing a roll call
- Liaising with the fire service