

# VIDYA BHAWAN BALIKA VIDYAPEETH

## STUDY MATERIAL SCIENCE

### CLASS-VIII

Date : 17-06-2021

Teacher : Poonam Kumari

#### ▶ Combustion :

##### Controlling fire :

Accidental fires are common in cities. In many cases, the fire is started by an electrical short circuit, a gas cylinder burst or by a lighted stump of cigarette or a burning matchstick. In villages, carelessly kept kerosene lamps are often the cause of fires. A fire can cause huge loss of property and can even result in loss of lives.

In every city there are fire stations that are equipped with fire engines, water tankers, ladders and other implements to fight fire. In India, the emergency number '101' connects to the fire department. This is a common number for all cities in India.

In most cases, water is used to extinguish fires. Large volumes of water when poured on burning material, cools it below its ignition temperature and water vapour surrounding the burning material cuts off the supply of air and thus helps in putting out the fire. However, in case of an oil fire, water is not used to extinguish the fire because oil floats on water. In such cases, liquid foam is used, which floats on the burning oil and cuts off the supply of air.

## Fire Extinguisher :

To sustain a fire, three things are critical, fuel, heat and oxygen. If any one of the three conditions is eliminated, manually the fire cannot be sustained. Most fire fighting operations rely on the other two-cooling the fire and cutting off the supply of oxygen because removing the fuel from burning site is not possible.

The best material for cooling is water. However, water cannot be used during oil fires since it would simply sink to the bottom and may even spread the burning oil, making the fire worse. If water is used in an electrical fire, there is a risk of electrocution. That is why specific agents are used to extinguish different types of fire.

Definition : Fire extinguisher is a manually operated device, used to cut off the supply of air or to bring down the temperature of the fuel, or both.