# Oxygen cycle Photosynthesis Oxygen in the atmosphere Respiration Respiration Rusting Decomposition of waste materials and dead organisms Decomposition Combustion of waste materials and dead organisms Carbon dioxide in the atmosphere **Carbon cycle** Carbon dioxide in the atmosphere Burning of fossil fuels Decomposition Photosynthesis Respiration Respiration

Is eaten

Dead organisms

Fossil fuel (petroleum, natural gas and coal)

## Combustion

### **Definition:**

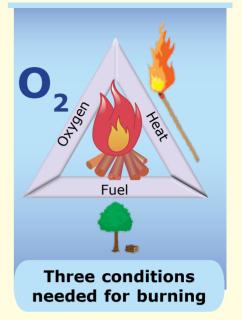
A reaction that occurs when a substance is heated in the presence of oxygen which produce heat and light energy.

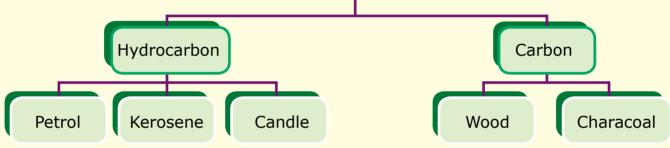
# **Condition for combustion to take place:**

Combustion can only take place with the presence of oxygen, heat and fuel simultaneously.

• **Fuel** is a substance that can be burnt to produce heat energy.

Types of fuel





The smoke released from the exhaust of a vehicle appears white because it contains saturated water vapour.



### **Reaction:**

Hydrocarbon + Oxygen → Heat + Light + Carbon dioxide + Water vapour



Black smoke released from a fire shows high carbon content in the fuel.

## **Reaction:**

Carbon fuel + Oxygen → Heat + Light + Carbon dioxide