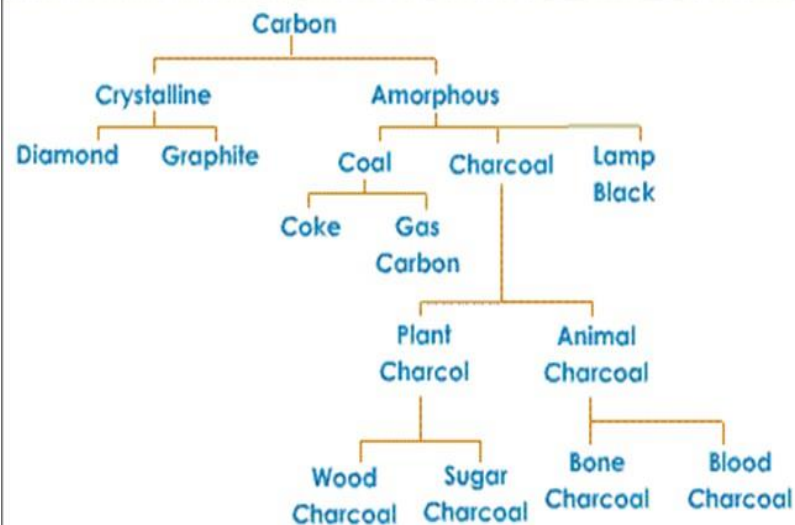
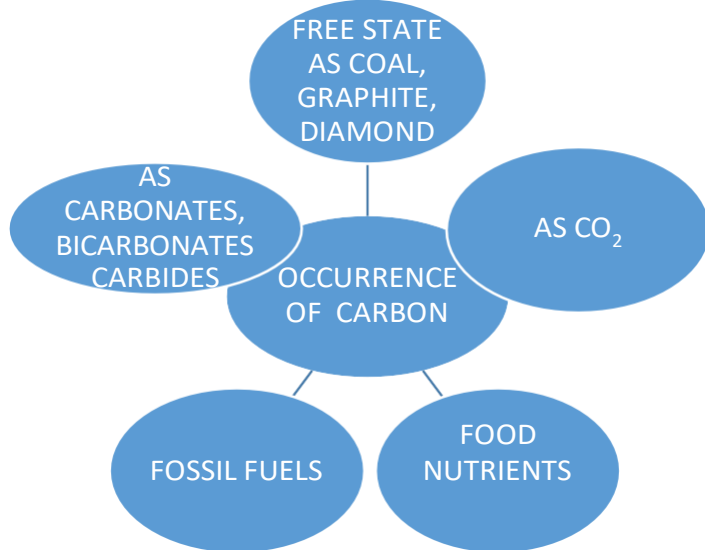
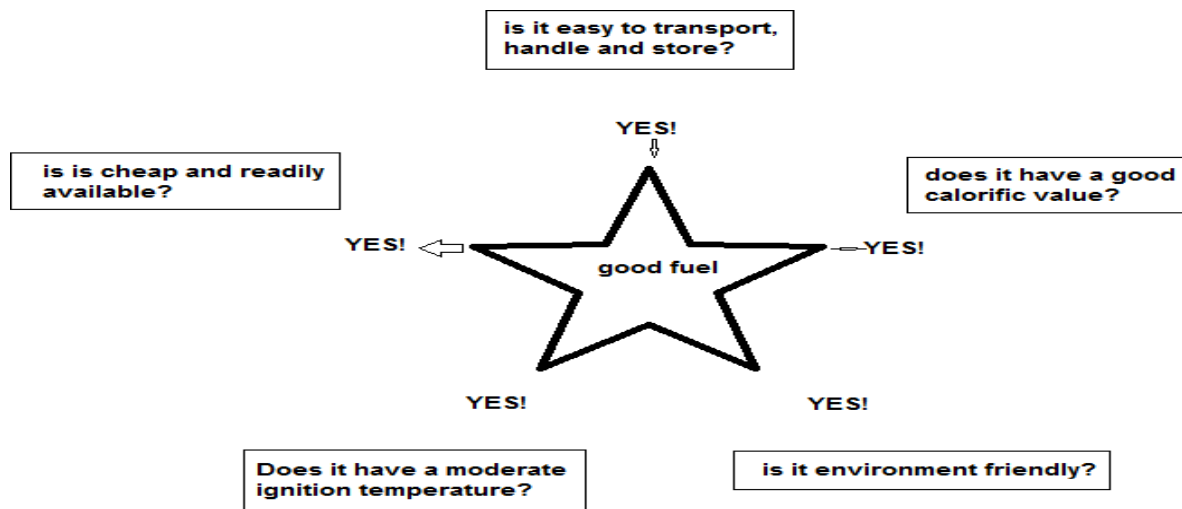


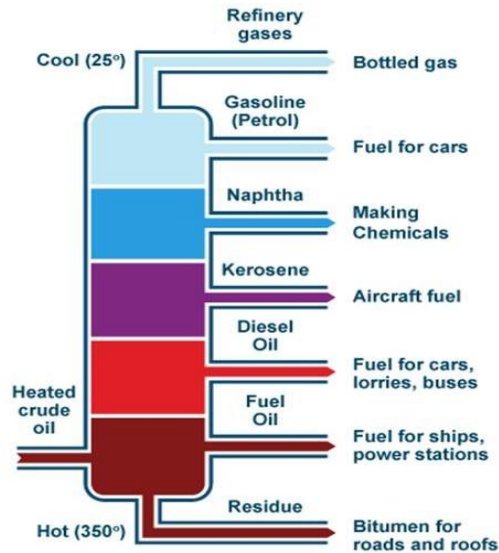
ICSE CLASS 8 CHEMISTRY REVISION NOTES ' CARBON AND ITS COMPOUNDS



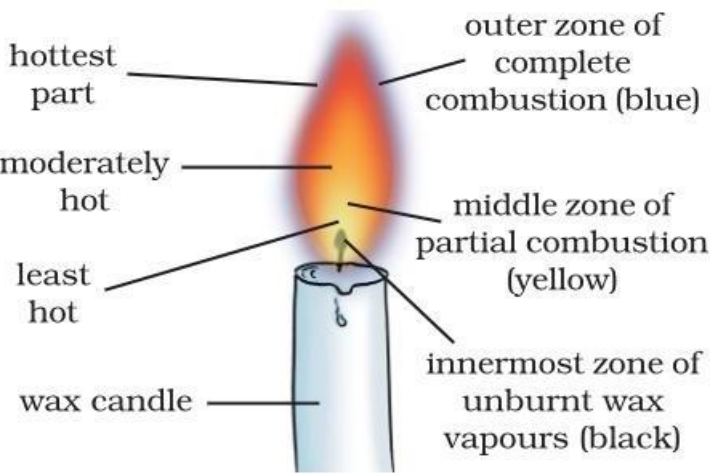
Allotropy is the phenomenon where an element exists in two or more forms with identical chemical properties but different physical properties



Fuels: Substances that burn in air to produce heat and light energy

Combustion: A chemical process in which substances combine with oxygen to produce a large amount of energy in the form of heat and light 3 conditions needed: - Combustible substance - Supporter of combustion - Ignition temperature	Primary fuels: Coal, wood, natural gas- obtained directly from nature Secondary fuels: Coke, kerosene, water gas- derived from natural fuels Fossil fuels: Coal, petroleum, natural gas. They are the result of the decomposition of dead plant and animal matter buried deep in the Earth's crust.	 The diagram illustrates the fractional distillation of petroleum. Heated crude oil enters a distillation column. At the top, where it is coolest (25°C), refinery gases are collected and bottled. Moving down, gasoline (petrol) is collected for use as fuel for cars. Naphtha is collected for making chemicals. Kerosene is collected for use as aircraft fuel. Diesel oil is collected for use as fuel for cars, lorries, and buses. Fuel oil is collected for use as fuel for ships and power stations. At the bottom, where it is hottest (350°C), residue is collected and used as bitumen for roads and roofs. Petroleum and its products
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Flame

 The diagram shows a candle flame with four distinct zones. The outermost zone is blue and labeled 'outer zone of complete combustion (blue)', with a line pointing to it from the label 'hottest part'. The middle zone is yellow and labeled 'middle zone of partial combustion (yellow)', with a line pointing to it from the label 'moderately hot'. The innermost zone is black and labeled 'innermost zone of unburnt wax vapours (black)', with a line pointing to it from the label 'least hot'. The wax candle itself is labeled 'wax candle'.	Fire extinguishers: Devices in which carbon dioxide is produced in different forms for use as extinguishing agents to put off the flame - Soda acid fire extinguisher - Foam based extinguisher - Liquid carbon dioxide extinguisher	Carbon monoxide: When there is incomplete burning, CO is produced. CO combines with haemoglobin to form carboxyl haemoglobin. This prevents Hb from carrying oxygen, thus causing deprivation of oxygen to body cells. CO is highly poisonous and can cause death. CO is a reducing agent: $\text{CuO} + \text{CO} \rightarrow \text{Cu} + \text{CO}_2$ $\text{PbO} + \text{CO} \rightarrow \text{Pb} + \text{CO}_2$ $\text{Fe}_2\text{O}_3 + 3\text{C} \rightarrow 2\text{Fe} + 3\text{CO}_2$
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