

# 8th Standard- Science

## Coal and Petroleum Class

**Natural Resources:** The resources, that are obtained from nature are called natural resources, for example, air, water, soil and minerals.

**Inexhaustible Natural Resources:** The resources, that are present in unlimited quantity in nature, and cannot be exhausted by human activities, for example, air, sunlight etc.

**Exhaustible Natural Resources:** The resources, that are present in limited quantity in nature, and can be exhausted by human activities, for example, coal, petroleum, minerals, forests etc.

**Fossil:** The remains of the part of plants or animals transformed over time, is called fossil.

Some exhaustible natural resources from the dead remains of living organisms are known as fossil fuels, for example, coal, petroleum and natural gas.

Coal is a fossil fuel, that was formed by the decay of vegetation, which existed millions of years ago. It is a non-crystalline form of carbon.

**Carbonisation:** The slow process of conversion of dead vegetations into coal is called carbonisation.

Coke is an amorphous form of carbon, which is harder and denser than charcoal and is used as a fuel. It is obtained by heating soft coal in the absence or little supply of air. It is black in colour. It is used in the manufacture of steel.

**Destructive Distillation:** The process of heating coal in the absence of air is called destructive distillation.

Coal Tar is a black thick liquid, i.e., a mixture of about 200 substances and is used to get various materials of everyday life/industry, like; drugs, dyes, plastics, perfumes, paints, naphthalene balls etc.

Coal Gas is a by-product, that is obtained during the processing of coal to form coke, and is used as a fuel.

Petroleum is a fossil fuel, that is obtained by the decomposition of dead animals and plants due to geological changes under the earth. It means oil from the rocks. It is a dark oily liquid that is insoluble in water.

**Various constituents of petroleum and their uses are as follows:**

<b>S. No.</b>	<b>Constituents of Petroleum</b>	<b>Uses</b>
1.	Petroleum Gas in Liquid form (LPG)	Fuel for home and industry
2.	Petrol	Motor fuel, aviation fuel, solvent for dry cleaning
3.	Kerosene	Fuel for stoves, lamps and for jet aircrafts
4.	Diesel	Fuel for heavy motor vehicles, electric generators
5.	Lubricating oil	Lubrication
6.	Paraffin wax	Ointment, candles, vaseline etc.
7.	Bitumen	Paints, road surfacing

**Petroleum Refining:** The process of separating the different constituents/fractions of petroleum is known as petroleum refining.

Natural Gas is a very important fossil fuel, that is stored under high pressure and is easy to transport through pipes and referred to as CNG (compressed natural gas). It is a non-polluting fuel. It helps in the manufacture of a number of chemicals and fertilizers.

**Coal:** Coal is a fossil fuel, formed by the decay of vegetation which existed millions of years ago.

**Coal Gas:** Coal gas is obtained as a by-product during the processing of coal to form coke, and is used as a fuel.

**Coal Tar:** It is a black thick liquid with an unpleasant smell obtained by the processing of coal.

**Coke:** It is tough, porous and black substance obtained by the processing of coal.

**Fossil Fuel:** Dead remains of living organisms and buried over millions of years, like coal, petroleum and natural gas are fossil fuels.

**Natural Gas:** Natural Gas is a very important fossil fuel. It is a cleaner fuel.

**Petroleum:** It is a dark oily liquid with an unpleasant odour. It is a source of petrol and diesel.

**Petroleum Refinery:** Petroleum refinery is a place where the process of separating the various constituents of petroleum is carried out.