

ATOMIC ENERGY CENTRAL SCHOOL, KUDANKULAM

CLASS: VIII

SUB: SOCIAL SCIENCE

CHAPTER 3 MINERAL AND POWER RESOURCES

MODULE (1)

A. MINERALS AND THEIR TYPES

Mineral is a naturally occurring substance that has a definite chemical composition.

They are concentrated in a particular area or rock formations.

Minerals are identified on the basis of their physical properties such as colour, density, hardness and chemical property such as solubility.

Minerals are classified as Metallic minerals and nonmetallic minerals on the basis of composition.

Metallic minerals are classified as ferrous minerals and non-ferrous minerals.

Ferrous minerals contain iron. Example, iron ore, manganese and chromite.

Non-ferrous minerals do not contain iron. Example: gold, silver, copper and lead

Nonmetallic minerals do not contain metals. Example: Limestone, mica and gypsum.

The mineral fuels like Coal and petroleum are also non-metallic minerals.

B. EXTRACTION OF MINERALS

Mining is the process of taking out minerals from rocks from earth's surface.

OPEN-CAST MINING: minerals are taken out by removing the surface layer.

SHAFT MINING: Deep bores called shafts to be made to reach minerals in depth. This is called shaft mining.

DRILLING: Deep wells are bored to take the minerals such as Petroleum and natural gas. This is called DRILLING.

QUARRYING: Minerals, near the surface are simply dug out. This process is called quarrying.

C. DISTRIBUTION OF MINERALS

Metallic minerals like Iron Ore, Copper and Nickel are found in igneous rocks and metamorphic rocks.

Nonmetallic minerals like lime stone are found in Sedimentary rocks.

Mineral fuels like coal and petroleum are found in the sedimentary strata.

D. DISTRIBUTION OF MINERALS IN DIFFERENT CONTINENTS

(1) ASIA

- (a) China and India have large deposits of iron ore
- (b) China, Malaysia, and Indonesia are the world's leading tin producers.
- (c) China leads in the production of lead, antimony and tungsten.

(2) EUROPE

- (1) Europe is rich in iron ore production.
- (2) Russia, Ukraine, Sweden and France have large deposits of Iron Ore.

(3) NORTH AMERICA

- (1) Canadian region has the deposits of Iron ore, nickel, gold, uranium and copper.
- (2) Appalachians region has coal.
- (3) Western Cordilleras have copper, lead, zinc, gold and silver.

(4) SOUTH AMERICA

- (1) Brazil is the largest producer of high grade iron ore
- (2) Chile and Peru are leading producers of copper.
- (3) Brazil and Bolivia are the world largest producers of tin.

(5) AFRICA

- (1) Africa is the world's largest producer of diamonds, gold and platinum.
- (2) Gold is produced in South Africa, Zimbabwe and Zaire.

(3) Oil is found in Nigeria, Libya, and Angola.

(6) AUSTRALIA

(1) Australia is the largest producer of Bauxite in the world.

(2) Also the leading producer of gold, diamond, iron ore, tin and nickel.

(7) ANTARTICA

(1) Coal is found in Transantarctic Mountains.

(2) Iron is found in the Prince Charles Mountains of East Antarctica.

(3) Iron ore, gold, silver and oil are present in commercial quantities.

E. DISTRIBUTION IN INDIA

Iron:

Iron is found mainly in Jharkhand, Orissa, Chhattisgarh, Madhya Pradesh, Goa, Maharashtra and Karnataka.

Bauxite:

Major bauxite producing areas are Jharkhand, Orissa, Chhattisgarh, Madhya Pradesh, Gujarat , Maharashtra and Tamil Nadu.

Mica:

Mica deposits mainly occur in Jharkhand, Bihar, Andhra Pradesh and Rajasthan. India is the largest producer and exporter of mica in the world.

Copper:

It is mainly produced in Rajasthan, Madhya Pradesh, Jharkhand, Karnataka and Andhra Pradesh.

Manganese

India's manganese deposits lie in Maharashtra, Madhya Pradesh, Chhattisgarh, Orissa, Karnataka and Andhra Pradesh.

Limestone:

Major limestone producing states in India are Bihar, Jharkhand, Orissa, Madhya Pradesh, Chhattisgarh, Rajasthan, Gujarat and Tamil Nadu.

Gold:

Kolar in Karnataka has deposits of gold in India. These mines are among the deepest in the world which makes mining of this ore a very expensive process.

Salt:

Salt is obtained from seas, lakes and rocks. India is one of the world's leading producers and exporters of salt.

F. USE OF MINERALS

- (1) Gems are used in jewellery industry
- (2) Copper is used to make pipes and electrical equipment.
- (3) Silicon is used in the computer industry. It is obtained from quartz.
- (4) Aluminum is obtained from Bauxite. It is used in automobiles, bottling industry, buildings and kitchen cookware.

G .CONSERVATION OF MINERALS

- (1) Minerals are a non-renewable resource.
 - (2) It takes thousands of years for the formation and concentration of minerals.
 - (3) The rate of formation is much smaller than the rate at which the humans consume these minerals.
 - (4) It is necessary to reduce wastage in the process of mining.
 - (5) Recycling of metals is another way in which the mineral resources can be conserved.
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