

Lesson - 6

Industry and Transport system of India



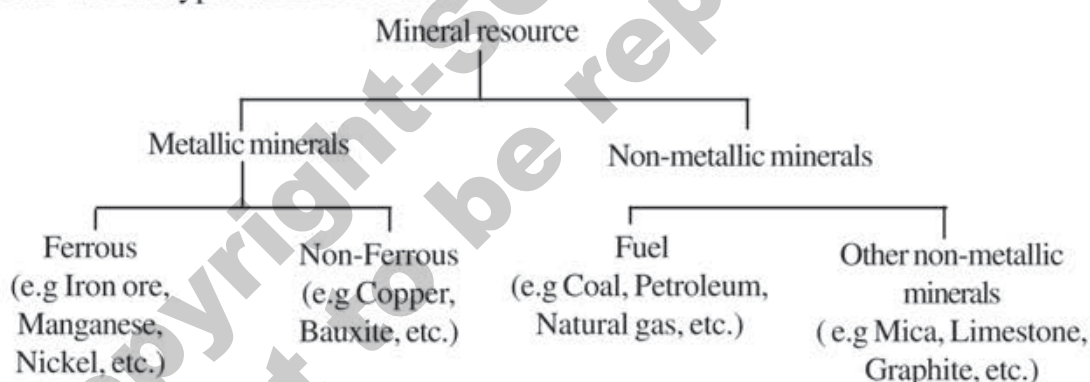
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Learning outcomes :

Students will

- ✦ know about the mineral resources and their distribution in India.
- ✦ have an idea about the major mining industries of India.
- ✦ know about the textile industry of India.
- ✦ have an idea about the different types of transport and their status in India.
- ✦ have an idea about the roadways, airways and waterways of India.

You have studied in Social Science in your previous class that the mineral resources are found in the crust of the earth. Various types of mineral deposits are found in a natural state. These minerals are extracted through mining. Hence they are called minerals. Since they are utilized by people for various uses they are called mineral resources. Mineral resources can be divided into various types as shown below-



Distribution of mineral resources in India :

Mineral resources are not evenly found in India. The minerals which are available in abundant quality in India are— Ferrous minerals such as iron-ore and manganese, non-ferrous minerals such as copper, bauxite and non-metallic minerals such as mica, limestone, graphite, fuel such as coal, petroleum, natural gas, etc.

On the basis of distribution of mineral resources in the country, six major belts rich in minerals can be identified. In the table given below, details of available mineral resource and their distribution is shown.

Mineral belt	Location	Availability of Mineral Resource
North-East Peninsular belt	Chotanagpur Plateau, Orissa, Jharkhand, West Bengal	Coal, iron-ore, manganese, bauxite, copper, chromite, kyanite etc.
Central belt	Chattisgarh, Andhra Pradesh, Madhya Pradesh and Maharastra	Manganese, bauxite, uranium, marble, coal, graphite, mica etc.
South belt	Karnataka Plateau and Tamil Nadu	Iron-ore, manganese and bauxite
South-Western belt	Karnataka and Goa	Iron-ore and clay
North-Western belt	Rajasthan including Aravali Hills and Gujarat	Barilium, acquamarine, petroleum, gypsum.
North-Eastern Petroleum belt	Brahmaputra valley in Assam	Petroleum, coal

Activity

- ★ Look at the map given below showing the major minerals belts of India and find out the states or major places under each of these belts. You can take the help of the map.

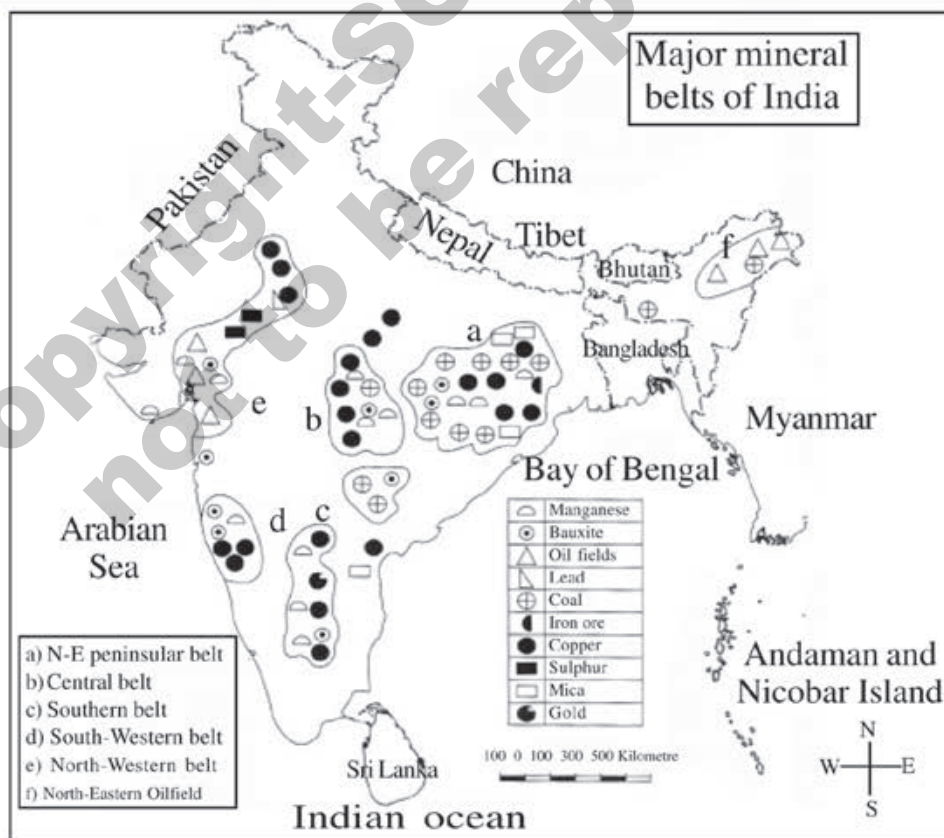


Fig : 6.1 Major mineral belts of India

Major mineral based industries in India

The industries which are established based on minerals are called mineral based industry. Iron and steel industry are considered as the major mineral industry in India since iron and steel forms the basis of many other industries. Development of iron and steel industry in India has led to industrial progress in India. Mineral industry in India is providing employment to around 7 lakh workers.

The essential raw materials for iron and steel industry are iron-ore, limestone, dolomites, manganese etc. Considering the heavy weight of these raw materials and their transportation, iron and steel industries are generally located near the sources of raw materials.

The major iron and steel industries in India are-

Let us know :

✦ The position of India in terms of availability of mineral resources in the world is as follows---

Mineral Resource	World Ranking
Mica	1st
Coal	3rd
Iron	5th
Manganese	7th
Aluminium	8th

Cotton Textile Industry in India

Cotton textile is very old in India. It is basically an agriculture based industry. The cotton textile industries of Mumbai and Ahmedabad have developed with the help of the cotton produced in Maharashtra and Gujarat. Maharashtra sup-

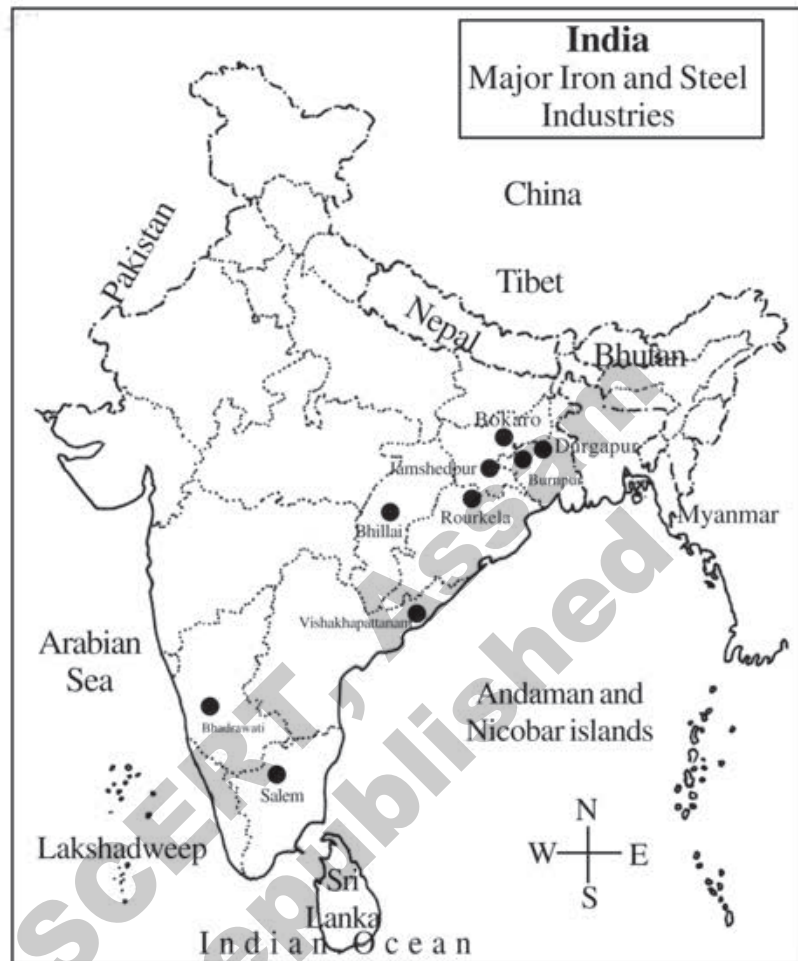


Fig : 6.2 Major Iron and Steel Industries of India

Iron steel Plant in Jamshedpur, Burnpur's Iron and Steel Plant, Visheswaraya Iron and Steel Plant in Bhadravati, Rourkela Iron and Steel Plant, Bhilai Iron and Steel Plant etc. Iron and steel industries in India could not make profit upto the expected level. This is because of involvement of huge investment, scarcity of fuel, lack of skilled labour and other facilities.

Let us know :

✦ The first cotton mill in India was established in Fort Gluster near Kolkata in 1818. India ranks 3rd in cotton production, 2nd in silk and 6th in synthetic fibre production globally.

plies 10.79 pc. of cotton yarn to India's textile mills. Cotton textile mills have grown in the Mumbai-Ahmedabad region due to factors such as availability of machineries, colours, chemicals, existence of ports to import cotton and export finished products.

At present the important centres of cotton textile industry in India are-Ahmedabad, Bhiwandi, Sudapur, Kolhapure, Nagpur, Indore and Ujjain. These mills are located near cotton producing areas. Maharashtra, Gujarat and Tamil Nadu are the major cotton producing states in India.

Activity

- ✦ Write down the factors responsible for growth of cotton textile industry in Mumbai, Ahmedabad and Tamil Nadu region

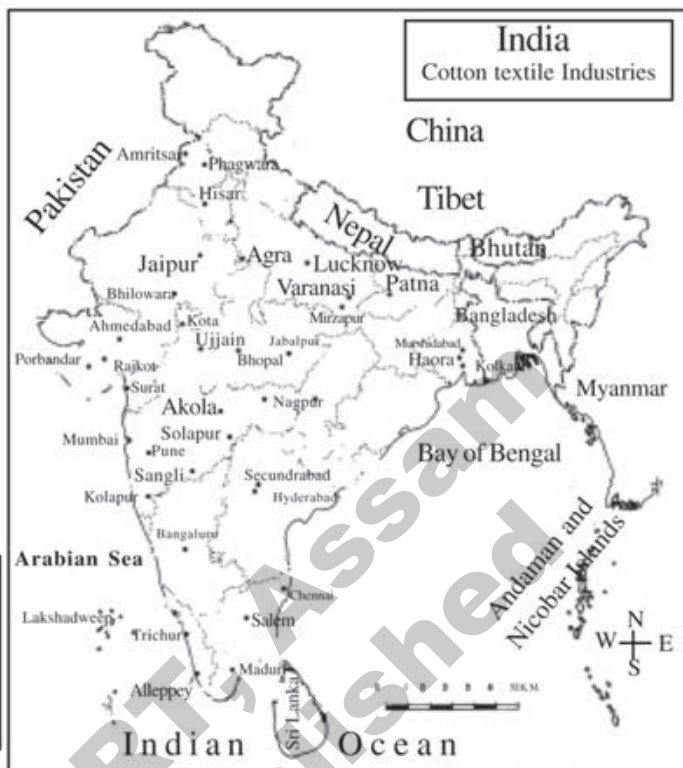
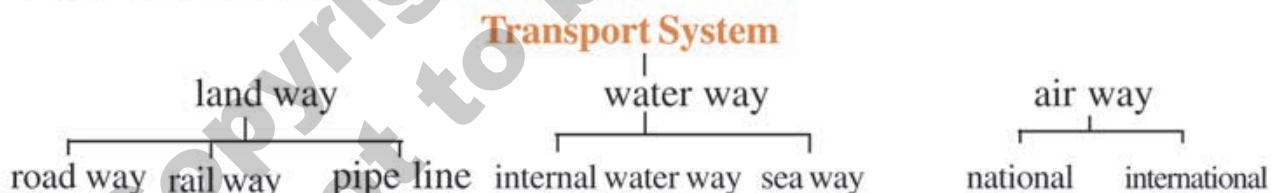


Fig : 6.3 Location of some Cotton Textile Industries in India

Transport System in India

In the past, people used to move from one place to another on foot or with the help of animals such as elephants, horses, donkeys, bulls etc. They used to transport men and commodities on boats in water. Science and technology has made it possible to develop improved transport systems on land, water and airways. This has enabled the movement of modern vehicles, trains on land, various luxurious ships and automated boats on waterways and aeroplanes in the airways. Transport system can be divided as given below-



Activity

- ✦ What changes have taken place in the transport system from the past till date? State why such changes have taken place.

Land Transport- Railways

Rail transport is a very important and extensive transport system of India. Rail transport is comparatively more advantageous commercially for

Let us know :

- ✦ The first train in India ran from Mumbai to Thane on 16th April, 1853 covering a distance of 34 kms. At present, Indian Railways is the second largest rail network in Asia and ranks fourth in the world.

transportation of goods and people and for long journeys. In India Railway line covers a total length of 67,956 kms. The country's rail transport system has been divided into 16 divisions for proper management. Assam's rail transport is under the North-East Frontier Railway division. Its head quarter is in Maligaon.

Let us know :

- ✦ The Vivek Express train is the longest route on the Indian Railways network. It covers the distance of 4273 km i.e. from Dibrugarh to Kanyakumari in one journey.

India's topography is composed of hills and mountains, plateaus, plains, river valleys etc. Comparatively, there is a dense network of railways in the plain areas. As such, more number of rail lines are seen in the Ganga-Brahmaputra plains and the plains of the Peninsular plateau regions. Rail routes are very few in the Himalayan region. Huge revenue is collected through the Indian Railways and it helps to boost up the nation's economy. At present more than 13 lakh officials are employed in Indian Railway services. Everyday, around 31 million passengers and 2.8 million goods are transported via rail transport. In the year 2018-19, Rs. 1.97 lakh crores were earned from rail transport.

Land Transport - roadways

Roadways play a significant role in transportation. It is evident in the history of India that Emperors, Ashoka and Chandra Gupta emphasised on construction of roads. Later on, further development took place during the rule of the Mughals.

On the basis of its use, road transport can be divided into four types-National highways, State highways, District roads and rural roads.

National Highways

The National Highways in India covers the entire state of land from north to south and the east to west. NH 44 is the longest highways in India with a length of 3745 km. It extends from Srinagar in the north to the Kanyakumari in the south.

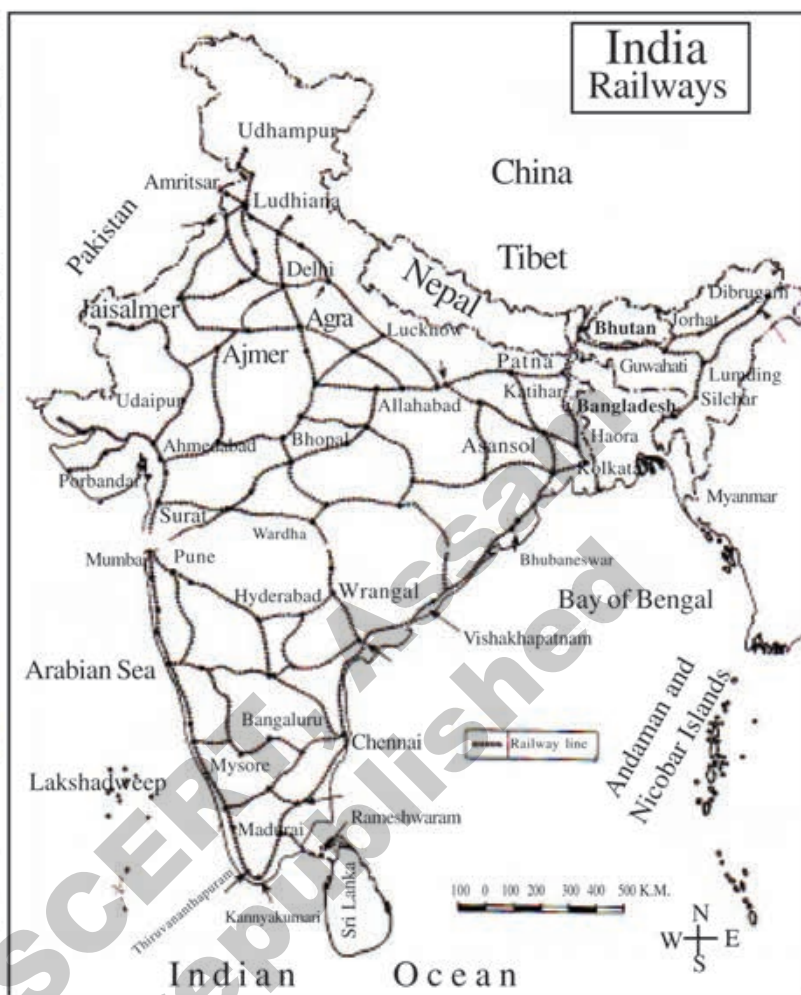


Fig : 6.4 India : Railways

Let us know :

- ✦ India's rail transport system operates 13169 passenger trains every day. Overall there are 7325 railway stations in India.

State Highways

The State Highways connects the district headquarters of each state. State Public Department manages development in a state and maintains inter-state relationship.

District Roads

These roads connect various places in a district apart from the district headquarters. The District Council looks after these roads.

Rural Roads

The big and small roads in a village influence the lifestyle of the villagers to a great extent. Good quality roads are essential for facilitating human activities, movement of vehicles and others. A number of roads have been constructed under the Pradhan Mantri Gramin Sadak Yojana to connect the main roads in the rural areas. These roads have developed the rural transport system in addition to strengthening the rural economy.

Air Transport - airways

Air transport is the fastest means of transportation. One can move from one place to another within a very short time. The air mail service covering a distance of 10 kms. between Allahabad and Naini in 1911 is the first ever air transport service in India.

There are about 486 airports in India. In addition to Guwahati, India has 24 international airports at Delhi, Mumbai, Kolkata, Chennai.

Activity :

- ✦ With the help of an atlas, find out and write the names of the states in India having an International Airport.

Pipeline Transport

Initially pipelines were used to supply water to the towns and industries. The importance of pipelines have increased nowadays. Since mineral oil, petroleum product and natural gas are transported from the oilfields to the refineries through pipelines. In addition to that, cooking gas is supplied for domestic consumption in certain towns.

The three important pipeline routes of India are- pipelines carrying oil from the fields in Upper Assam to Kanpur, Guwahati-Barauni and Allahabad pipelines. Its other branches include Barauni to Haldia via Rajbandh, Rajbandh to Mourigram and Guwahati to Siliguri. Likewise there

Let us know :

- ✦ Kerala has the most dense network of roads in India. On the other hand, the state of Jammu and Kashmir has the least number of roads.
- ✦ The length of National highway in Assam is 3900.44 km. Along with this arrangement has been made to improve other 1253 km. state highway to national highway.

Let us know :

- ✦ Six major pipeline transport in India are-
 - Naharkatia- Noonmati- Barauni Pipeline
 - Mumbai High-Mumbai-Ankleshwar-Kayoli Pipeline
 - Salaya-Koyali-Mathura Pipeline
 - Hajira-Bijapur-Jagdishpur Gas Pipeline
 - Jamnagar-Loni LPG Pipeline
 - Kandla-Bhatinda Pipeline

Water Transport- sea routes

There are 13 major, 18 minor and a few number of smaller sea ports in India. The major ports are Mumbai, Jawaharlal Nehru port, Marmagao, New Mangalore, Kochi, Kolkata, Haldia, Paradip, Vishakhapatnam, Chennai, Indore, Tutikorin etc.

Inland Water Transport

World water transport system prevailed in India at the time when there was no railways and roads were inactive. Heavy cargo can be transported at less cost since water transport is comparatively cheaper. Rivers like Ganga, Brahmaputra, Bhagirathi, Hugli and Barak, etc. are suitable for navigation. The total length of waterways in India is 14,500 kms. Brahmaputra and Ganga are the two major inland waterways of India.



Fig :6.5 A riverport of Inland water transport of Assam

Let us know :

- ✦ A stretch of 1,384 kms. of the river Brahmaputra is suitable for navigation. A portion of it from Sadia to Dhubri in Assam (891 kms.) is a National Inland Waterway.

The transport system of a country plays a vital role in its progress. Communication and inter linking transport system act as arteries and veins of a country. Transport system has been playing an important role in the development of a large country like India.

Let us Remember

- ✦ On the basis of distribution of mineral resources in India, six major mineral belts have been identified. These are North-Eastern Peninsular belt, Central belt, Southern belt, South-Western belt, North-Western belt and North-Eastern Petroleum belt.
- ✦ India ranks 1st, 2nd and 3rd respectively in terms of production of mica, coal and iron ore worldwide.

- ✦ Textile mills of India are located in Mumbai and Ahmedabad region.
- ✦ For smooth functioning and management of railways, India has been divided into 16 divisions. The rail routes of Assam is under the control of the North-East Frontier Railways division.
- ✦ Including Guwahati, Delhi, Mumbai, Kolkata, Chennai, there are altogether 24 International Airports in India.
- ✦ NH 44 is the longest National Highway in India. It has length of 3745 kms.
- ✦ There are three major pipeline systems in India. The pipeline that extends from Assam connects the oil fields in Upper Assam to Kanpur-Guwahati-Barauni and Allahabad.
- ✦ River Brahmaputra and Ganga are the two major inland waterways of our country.

Exercise

1. Write answer-

- a) Name an industry that uses iron-ore as a raw material.
- b) Write the name of a fuel mineral.
- c) Name one cotton producing state in India.
- d) Which means of transport is most extensively used in India.

2. Choose correct answer

- a) In the production of mica India ranks
 - i) Third,
 - ii) Second,
 - iii) First.
- b) The first ever train commenced in India is in the year
 - i) 1835
 - ii) 1935
 - iii) 1853
- c) The longest national highways in India is-
 - i) NH 1,
 - ii) NH 2,
 - iii) NH 44.
- d) The state having densest network of roads in India is
 - i) Assam,
 - ii) Kerala,
 - iii) Andhra Pradesh.

3. Give short answers-

- a) Which are the major mineral belts of India? Does Assam fall into any mineral belt?
- b) Name five major iron and steel industries of India.
- c) Why the weaving industries have developed in the Mumbai-Ahmedabad region?

4. Write how the use of science and technology has changed the system of land, water and air transportation.

5. Give three argument in favour of the statement that 'transport systems are veins and arteries of a country.'

6. Write the names of the following with the help of an atlas :

- a) Names of the district headquarters in Assam connected by national highways.
- b) Names of the north-eastern states of India not connected by railways.
- c) Name of the last railway station in Dhemaji district in the north bank of Brahmaputra.

7. Why the role of international airports is crucial? Write.