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Human Environment-2 (Transport and Communication)

Lesson Plan

Contents

- ▶ An overview of transportation and communication by human beings
- ▶ To understand the manner in which human beings transport themselves and their goods, and how they communicate

Objectives

- ▶ To understand transport and communication by human beings
- ▶ To learn how and why they transport and communicate
- ▶ To know about the means human beings use
- ▶ To appreciate the significance of transportation and communication

Teacher's Aids

- ▶ Globe
- ▶ Pictures, charts, atlas and wall maps
- ▶ Blackboard
- ▶ Internet

Tips for Teacher

- ▶ Explain what transport and communication are, why they are required and what are the means used for accomplishing them.
- ▶ Students should be encouraged to know places, locations and their placement on the maps.
- ▶ Ask random questions about what the students have seen about transport and communication in different places—how people travel, how goods are transported, why they travel, what are the different vehicles used, etc.

Background and Reading

- ▶ Read the lesson aloud and explain, sharing the aids, etc., pausing to examine and explain the data in the boxes.
- ▶ Particularly focus on the means and reasons for transport and communication.

Transport

- ▶ It is the movement of goods and passengers from one place to another using humans, animals or some kind of vehicle, over land, water and air.
- ▶ Beginning–Man used to carry his luggage himself.
- ▶ Wheel–able to carry larger loads and use animals.
- ▶ Steam engine and internal combustion engine–new and faster means developed–cover longer distances. Even today animals used–donkeys, mules, bullock carts, camels, etc.
- ▶ Different transport for different places, purposes and times.
- ▶ Selection of mode–type of goods and services, cost of transportation, area and means of transport available–save time, energy and expenditure.
- ▶ Important means: Road, rail, air and water, and also ropeway and pipelines.

Roadways

- ▶ Cheapest and quickest means for short distances–metalled or unmetalled roads–progress due to industrial development.
- ▶ Now highways and expressways–metalled roads connecting distant places; wide, smooth, several lanes, bridges and flyovers.
- ▶ Advantages: (i) Cheapest, quickest for short distances (ii) Easy to construct in rough terrain and forests (iii) Suitable to transport fragile and perishable goods (iv) Cost less than railways (v) Can make doorstep delivery to customer.
- ▶ Density not same everywhere–distribution uneven–economically and industrially developed have better network than developing and poor countries.
- ▶ India–large network–state and national highways–now Golden Quadrilateral: Delhi, Mumbai, Kolkata, Chennai; Manali–Leh Highway: One of the highest roads in the world; underground roads: Subways.
- ▶ Important world highways:
 - (i) The Trans-Canadian Highway [Vancouver–St John’s city]
 - (ii) The Trans-Continental Stuart Highway [Darwin–Melbourne, Australia]
 - (iii) The Highway from Changdu to Lhasa, China
 - (iv) The Golden Quadrilateral [India]

Railways

- ▶ Comparatively cheaper and sometimes more convenient than roadways–widely used for bulk goods over long distances.
- ▶ First public railway–England [Stockton–Darlington] 1825–since then popular and fast.
- ▶ Growth due to (i) Steam engine (ii) Rapid rise of industry–Industrial Revolution helped–now diesel and electric engines.
- ▶ Superfast trains in many countries.
- ▶ Commuter trains–popular in UK, USA, Japan, China, India.

- ▶ India – railways owned by government – largest public sector enterprise – freight services improved by facilities for tankers and containers.
- ▶ Advantages: (i) Quick means of land transport (ii) Can handle more load than roadways; (iii) Convenient for long distance travel (iv) Facilitate carriage of bulky material in large quantities (v) Movement of passengers and mail easier.
- ▶ Disadvantages: (i) Huge capital investment needed for railway infrastructure (ii) Different gauges obstruct smooth movement (iii) High cost of maintenance of infrastructure.
- ▶ Important world railways:
 - (i) Inter-continental rail routes connecting two ends of a continent:
 - (a) Trans-Siberian Railway: St Petersburg-Vladivostok [9332 km]
 - (b) Canadian-Pacific Railway: Vancouver-Halifax [7050 km]
 - (c) Australian Intercontinental: Sydney-Perth
 - (d) Cape-Cairo Railway: Cape Town and Cairo
- ▶ India: First railway – Mumbai-Thane; today, the second largest rail network after China in Asia; proposal to build Trans-Asiatic Railway linking Constantinople in Turkey with Bangkok in Thailand.
- ▶ Densest network – east-central USA and Western Europe.

Airways

- ▶ Fastest and costliest mode of transport – for high value goods and passengers – costly due to expensive fuel and sophisticated infrastructure – air traffic affected by bad weather like fog and storms.
- ▶ Invention by Wright Brothers in 1903 – many changes in design, size, technology, speed – people travel for personal and professional reasons.
- ▶ Characteristics: (i) Can use only fixed corridors over different countries (ii) Suitable for long distance travel (iii) Unsuitable for cheap and heavy goods (iv) Suitable for relief operations in remote and inaccessible areas (v) Only mode to reach distant areas, especially those without roads and rails.
- ▶ Well-developed in economically rich nations – due to availability of passengers and goods – dense air routes: Western Europe; South and South-east Asia; Eastern USA and Canada.
- ▶ Important airports: Paris, London, Rome, Frankfurt, Moscow, New York, Chicago, San Francisco, Los Angeles, Tokyo, Shanghai, Hong Kong, Beijing, Seoul, Singapore, Delhi, Mumbai, Kolkata, Bengaluru, Karachi, Buenos Aires, Rio de Janeiro, Cairo, Cape Town, Melbourne, Sydney.

Waterways

- ▶ Man using water transport since ancient times – cheaper because no tracks or maintenance on them required – cheapest means of transport – ideal for moving heavy and bulky goods over long distances.
- ▶ Types: Waterways and sea routes.

- ▶ Inland waterways: Rivers, canals, lakes – boats, steamers – carry cargo and passengers – development dependent upon: Width and depth of channel, continuity in flow of water, transport technology. Important: Ganga-Brahmaputra river system, Great Lakes in North America; the Mississippi waterway; densest network: France and Germany.
- ▶ Ocean and sea routes: Free highway in all directions at no maintenance cost – used for transporting goods from one country to another – use of containers made cargo handling and transfer to land transport at ports easier – modern passenger liners and cruise ships have radar, wireless and other navigational aids.
- ▶ Major world oceanic routes: (i) North Atlantic (ii) Mediterranean-Indian Ocean (iii) Cape of Good Hope (iv) South Atlantic (v) North Pacific (vi) South Pacific
- ▶ Most important shipping canals: Suez Canal and Panama Canal.
- ▶ Important sea ports: Asia: Tokyo, Shanghai, Hong Kong, Canton, Singapore, Kolkata, Mumbai, Karachi; North America: New York, San Francisco, Los Angeles, Vancouver; Europe: London, Rotterdam, Rome; Africa: Cape Town, Cairo, Durban; Australia: Sydney.

Communications

- ▶ It is the conveyance of information from origin to destination through a device, like the postal service, telephone, fax, Internet and satellite.
- ▶ Man passing messages since beginning of time – but pace of change very fast in last 50 years – information revolution – long distance communication without physical movement of communicator or receiver.
- ▶ First important breakthrough – Invention and development of telecommunications – personal and mass.
- ▶ Personal – telephone, fax, messages, etc.
- ▶ Mass Media: Radio, TV, newspapers, magazines, etc.
- ▶ Satellite – Internet: Telecom merged with computers – e-mail, cellular phones.
- ▶ India: launched Aryabhata 19 April 1975 with help of Inter-Cosmos Rocket; Rohini from Sriharikota. Internet used for communication, booking tickets, paying bills, etc.

Assessment Corner

Oral Assignment

- A. Ask for answers at random from the students. Confirm the right answers. Let them write down the correct answers if they like in their books.

Written Assignment

- B–E. The teacher has two options – (i) Either do these exercises orally first and then ask the students to write them down. OR (ii) Ask the students to write the answers on their own. Then the teacher can announce the correct answers and students can ask their partners to cross-check them.

In either case, the answers can be written as homework and the teacher can check them in the class.

Think Tank

- F. **HOTS questions:** Discuss the questions in the class and let the students write the answers to F and G as homework. Teacher should assess individual work.