

# 11

## Need for Transport

### Lesson Plan

#### Contents

- ▶ Invention of the wheel
- ▶ Invention of the steam engine
- ▶ Types of transport
- ▶ Roadways
- ▶ Railways
- ▶ Airways
- ▶ Waterways

#### Objectives

- ▶ What is transport?
- ▶ How it was affected by the inventions of the wheel and the steam engine.
- ▶ To learn about the various means of transport.

#### Teacher's Aids

- ▶ Maps showing road, rail, air and ocean networks.
- ▶ Use the internet to show how things were moved in olden times; for instance, in the construction during old civilisations in India, Egypt, etc.
- ▶ Models of different means of transport: students can try to bring one each for a display or project.

#### Tips for Teacher

- ▶ Animals as a mode of transport: camels, elephants, donkeys, huskies.
- ▶ Are there other modes of transport that run without wheels or steam, etc. – sledges, rafts, etc.,
- ▶ Which waterways were first used – link with earlier lessons – why did people settle in river basins? First used were waterways. Then land by walking, using animals, and wagons, carts, cars, etc., then railways and finally airways.

## /// Gear Up and Background

[The answer to this is hovercraft.

- ▶ Discuss in class: What is transport? Why do we need transport? Old and new methods of transport.
- ▶ Students can be asked to name different forms of transport they see on the roads. Share the models each one has brought and ask them to say something about them.

## /// The Invention of the Wheel and the Steam Engine

- ▶ Read and explain the lesson.
- ▶ How do you think the idea of the wheel could have come into the mind of human beings? Have you watched a log rolling? Rolling something is easier than pushing or pulling it. Hence the wheel.
- ▶ Can you think of other references to a wheel: transport, potter's wheel, the wheel of Time, etc.
- ▶ Ask students to visualise a world without wheels.
- ▶ The steam engine – who invented it?
- ▶ What changes came into transport because of the steam engine?
- ▶ What is used now for propelling transport?
- ▶ Link with the use of petroleum and electricity, studied earlier.

## /// Types of Transport

- ▶ Using the models and the internet, ask students to list various modes of transport.
- ▶ Also talk about saving time, improving health, pollution, and such related topics.

## /// Roadways

- ▶ Cutting a path or way through difficult terrain. [Example – Dashrath Manjhi, whose wife died due to lack of an access road; how he cut a road through a mountain]
- ▶ Pathways, metalled roads.
- ▶ Freeways or expressways.
- ▶ Network of highways in India.
- ▶ Important highways in the world.
- ▶ How a network of highways helps travel, tourism and economy.
- ▶ Related topics of pollution, use of petrol and diesel – petroleum is a limited resource.

## /// Railways

- ▶ What are railways? Tracks, their maintenance and safety measures.
- ▶ Compare their advantages/disadvantages with those of the roadways.
- ▶ Important railways in the world.

- ▶ The Indian railway network and its development.
- ▶ Superfast trains; Bullet trains.
- ▶ Special mention of trains like Konkan railways, the Metro; the historical value of the Shimla-Kalka or Nilgiris express; interesting trains like the one under the English Channel between England and France, etc.
- ▶ Some of the Maharajas/Nawabs had little trains carrying dishes running on a track around the dining table!

### /// Airways

- ▶ Introduce the old myths and legends: Icarus, the Pushpak Vimana, etc.
- ▶ Development of flying: the Wright brothers – The Flyer: 1903.
- ▶ Modern aircraft: passengers, cargo, fighters, helicopters, rescue and relief.
- ▶ Importance of air travel for tourism, work, economy, etc.
- ▶ Airports – domestic and international.
- ▶ The network of airways.

### /// Waterways

- ▶ The oldest and cheapest mode of transport.
- ▶ Draw attention to stories about sailors, etc.: Robinson Crusoe, Gulliver’s Travels, Sindbad the Sailor, Treasure Island, Huckleberry Finn, etc.
- ▶ Also tell students about the travels by Christopher Columbus, Captain Cook, trade in the subcontinent with Arab and European countries, etc.
- ▶ The different types of craft used for sailing or boating: from the oldest to the newest – rafts, canoes, kayaks, catamarans, dhows, houseboats, baskets used in places like Manipur, boats, speed boats, steamers, ferries, ships, luxury liners, submarines, aircraft carriers, war ships, cargo ships, ships used for fishing or for marine research, etc.
- ▶ Important sea routes, waterways, such as Panama Canal, Suez Canal, the interlinking of the Great Lakes in North America, the lock system used for facilitating transport on rivers, the great rivers of the world in various continents. Show old sea routes before the Panama and Suez canals were opened so that travel time could be reduced.
- ▶ Advantages/disadvantages of travel by waterways.