# 10. FIELD TRIP

The field trip is an important method of geography. Through field trips one can get a first hand experience of geographical factors and processes. Geographical concepts can be understood. Geographical field trips are useful for understanding the relationship between man and environment. It is essential to plan the field trips according to the topic, place and duration of the visit.

One of the important objectives of a field trip is to pay a visit to an office in order to understand the kind of work done there. Different types of information are collected during a field trip. For this purpose a questionnaire is prepared. After compiling the information a report is prepared.

**Preparations for the field trip :**

A copy of the questionnaire, a notebook, camera, pen, pencil etc. are an essential part of the kit. Prior permission should be obtained from the concerned office before fixing the date and time of the visit. Care should be taken not to damage anything during the course of the field trip. In this lesson, a sample questionnaire regarding a visit to the election office has been provided. Please go through this questionnaire. This kind of questionnaire is used for obtaining information from any office. On the basis of the following questions you can prepare your own questionnaire for a visit to the following places e.g. Talathi's office or a visit to a small scale industry.

**Questionnaire :**

**Visit to the elections division's office at the taluka and district level:**

(1) Name of the office.

(2) What is the designation of the chief at this office?

(3) What are the different duties performed by this office?

(4) Who directs the work carried out in the election division?

(5) Which are the various elections conducted through this office?

(6) From where do they get the additional manpower required during election?

(7) How many days prior to election is the notice given?

(8) Who does the work of enlisting new voters and updating the electoral lists?

(9) Who conducts the training programmes for the elections?

(10) Which are the licenses issued by the office during elections?

(11) How many people are appointed at the polling centre during voting?

(12) When is the voting of officials appointed for election duty taken? How?

(13) What are the timings of the voting?

(14) Is the timing of voting extended under special circumstances?

(15) What efforts are taken to make the process of voting transparent?

(16) Tell the advantages /disadvantages of voting machine. (EVM)

(17) How are voting machines obtained?

(18) Since when are the voting machines being used?

(19) What action needs to be taken if the voting machine becomes faulty?

(20) How was voting conducted earlier?

(21) The Code of Conduct is applicable for how many days before and after the elections?

(22) Which departments do you seek help from to conduct the elections?

(23) In which circumstances are by-elections held?

(24) What do you do if the candidates get equal votes?

(25) Who declares the end result of the election in the public?

(26) Does the office maintain records of the earlier elections?

(27) Do you issue certificates to the elected candidates? Who signs these certificates?

## Report –Writing:

After you collect information from the office you visited, you have to write a report. You can use the maps, tables and layouts, graphs, pictures and photographs for the same.

Write report as per the following points.

(1) Introduction
(2) Personnel working in the office
(3) Nature of work in the office'
(4) Problems encountered/Solutions
(5) Acknowledgement
(6) List of references

- Present the report in class either in individually or in a group

The students of a particular school along with their teachers made a field visit to the tehsildar's office. They prepared a questionnaire for understanding the entire election process. After meeting the Chief Electoral Officer they collected this information. After compilation and the preparation of a report, they made use of it for the school elections.

**Pictures of the election process**

### Project :

Prepare a plan for a fieldtrip of your class to a place of special interest/visit to an office and prepare a questionnaire.

Figure 10.1: Visit to the election office

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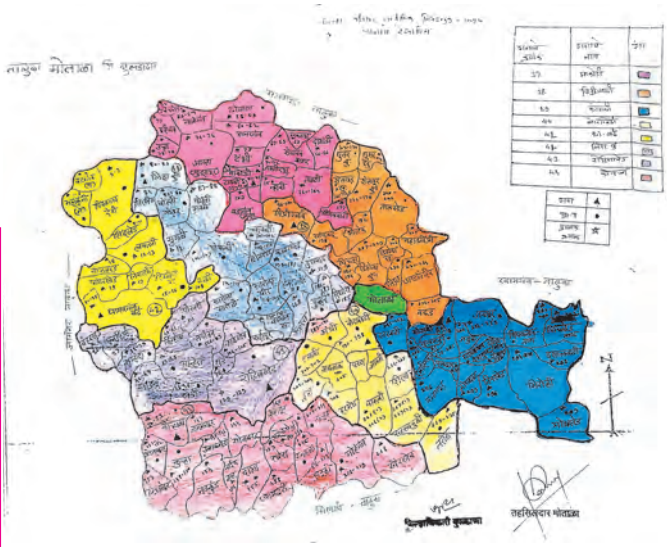

Figure 10.2: Map of the electoral constituency

Figure 10.3: Sample of the electoral roll

Figure 10.4: Electronic Voting Machine

## Detailed meanings of geographical terms

- **Absolute humidity:** The amount of vapour in the air at a particular time and place. It is expressed in gm/ cubic metre.
- **Bore hole:** A hole dug in the earth with a machine. Such holes are dug to take out groundwater from greater depths. To study the interior of the earth, many such holes have been dug at different places in the crust. For example, to study the earthquake in the Koyna- Varna region, a bore hole of 7 km depth is being dug.
- **Census:** The act of counting heads. People from a specific region are counted and this is called census. Such counting takes place after a specific time. It is very helpful in regional planning. In India, the Census takes place after every 10 years in the beginning of a decade. The earlier Census was conducted in the year 2011. There is also a Census taken of trees, animals and birds.
- **Central Business District (CBD):** A classification of urban land use. In larger cities, the trade or economic transactions are concentrated in a specific part of the city. This part is generally located in the center of the city. This is called the Central Business District (CBD). Generally, industries or residential areas are not found here. The population density is very less here. Administrative offices of many establishments are located here.
- **Cloud:** The accumulation of very minute floating water droplets or snow particles in the air. Clouds are found at higher elevations. When the air cools to the dew point, it becomes saturated and if the temperature reduces even more, then the vapour turns into water droplets. As these water droplets are lighter in weight, they start floating in the air and form clouds.
- **Code of Conduct:** Directions laid down by the Election Commission regarding behavior to be followed by the members and candidates of all the political parties during election period. The code of conduct is applicable from the day the elections are declared till the day of the results.
- **Condensation:** The process of changing of matter from vapur to liquid state. By this process, the vapur in the air turns into water droplets. If the process of condensation occurs at the ground level, then dew, fog, etc are formed. If it occurs at higher elevation, clouds are formed.
- **Corporate Social Responsibility:** It is a concept which was included in the Companies Act 2013.According to this, those companies whose net value is more than 500 crores and annual turnover is more than 1000 crores or whose profits are more than 5 crores, it is expected that they spend at least 2% of their profits in economic, social or environmental developmental work.
- **Dew:** Minute water particles deposited on cooled surfaces in morning or evening by the process of condensation in the air. Such small particles are found on the blades of grass or leaves of the trees. The temperature of the water is less than the surrounding air. When the vapour in the surrounding air comes in contact with cooler leaves, condensation occurs and water droplets are deposited on leaves.
- **Discontinuity:** In a graph, a discontinuity means the changes occurring in the trend of the graph shown. Scholars always look for the reasons behind such discontinuities. Seismologists found many such discontinuities in the trends of the velocities of the seismic waves according to depths. They studied the densities of the materials found in the respective depths and thus made estimations regarding the layers of the interior of the earth.
- **Duration of day:** The specific span of a day. From sunrise to the sunset, as we can see the sun in the sky, we experience light and so we called it daytime. On the other hand, from the sunset to the next sunrise, we do not see the sun and hence this duration is night time for us. The duration of a day changes according to seasons and also the latitudinal location.

- **Evaporation :** The changing of matter from liquid to gaseous state is called evaporation. The transformation of water into water vapour is the most common example of evaporation. If the amount of water vapour in the air near the surface of water is more, then the rate of evaporation is less, if the air is saturated, then evaporation does not occur. If there is breeze blowing over the surface of water i.e. air is being circulated, then the rate of evaporation is more.
- **Fallow land :** Farmers do not grow crops in some parts of cultivable land. Such land is called fallow land. The fertility of the land may reduce if it is cropped continuously. The farmer does not grow crops for some time on this land. This is called current fallow.
- **Fog :** Very minute ice or water particles floating in the air. Fog is different from the clouds. Fog is at lower elevations and fog occurs due to local weather conditions. The visibility in the area reduces because of fog.
- **Frost:** It is a form of condensation occurring near the earth's surface. Because of the lowering of temperature, the vapour in the air converts into ice particles. Layers of such ice particles are seen on leaves of the trees or grasses. Frost is generally seen in temperate regions during winters.
- **Geo-dynamo :** A part of the earth's core. It is mainly made of liquid (outer core) and solid iron (inner core). Because of temperature differences, vertical thermal currents develop in the outer core and hot liquid starts flowing in the upper direction. Comparatively cooler liquid starts flowing towards the centre of the earth. Such spiral currents, thus formed are parallel to the axis of the earth and in the form of columns. Many such currents are formed in the outer core of the earth. These spiral currents and the axis formed because of the rotation of the earth are together called the geo-dynamo.
- **Geo-magnetic field :** A part of the earth's core is mainly made of liquid (outer core) and solid iron (inner core). The inner and outer cores are hotter than the mantle. Because of temperature differences, vertical thermal currents develop in the outer core and hot liquid starts flowing in the upper direction. Comparatively cooler liquid starts flowing towards the centre of the earth. Such spiral currents thus formed are parallel to the axis of the earth and in the form of columns. Many such currents are formed in the outer core of the earth. This gives rise to the magnetic property of the earth. This gives rise to a magnetic field and a magnetosphere around the earth.
- **Gross National Product (GNP) :** Gross national Product (GNP) is an indicator of the economic activities of a country. It is the value of the goods and services produced by the citizens of a country. This includes the incomes of the citizens, incomes of the national companies located in foreign countries but does not include the income of foreigners generated in the country.
- **Gyre :** At some places, a circular pattern of movement of the ocean currents is seen. The equatorial currents flow from east to west because of the influence of the Easterlies. Near the continents, these currents turn towards the north or the south (according to the hemisphere) . Later, their direction changes because of the Westerlies and they start flowing towards the west. These currents get bifurcated near the continents and flow accordingly. One of these bifurcated currents again flows towards the equator and hence a circular pattern of movement of the currents is formed. The water in the centre of this circular pattern is somewhat still/calm. Such patterns are formed in all the oceans. In North Atlantic Ocean, a similar pattern is formed in the Sargasso Sea.
- **Heavy Industries :** The industries where the finished products are large in size and heavy, where large sized and heavy machinery is used or when the production process is multidimensional or where the industries occupy a large area eg. iron and steel industry, automobile industry etc.

- **Horizontal distribution :** A distribution parallel to the horizon. In the study of climate, there are changes in temperature and pressure on the earth's surface at different places. Similar changes also occur according to elevation. The distribution of these along the surface of the earth is called horizontal distribution. Study of these according to their elevation is called vertical distribution.
- **Industrialisation :** The process of the establishment and development of industries in a region.
- **Inner Core :** Part of the earth's core. In 1935, Inge Lehmaan, a Danish seismologist discovered that a part of the core is different from the outer core. He propounded that though the outer core is liquid, the inner core is solid. Later , scientists from Japan confirmed the same in around 1940. On the basis of the information gathered with the help of advanced and accurate seismometers, this was accepted in 1970.
- **Interior of the earth :** The part of the earth from its surface to its centre is called its interior. It contains three layers within each other. From the surface they are the crust, the mantle and the core respectively.
- **Land used for Public purpose:** Generally, such provisions are made in urban land use. As the population density is higher in urban areas, some land is reserved for recreational purpose of the citizens like playgrounds, gardens, green zones, etc. and it is used only for those purposes.
- **Large scale map:** A type of map according to scale. These maps give detailed information about small areas. Generally, maps having a scale of 1: 10000 or greater R.F. are called large-scale maps. Village maps, maps of farms are examples of large –scale maps.
- **Level of dew point temperature:** The temperature at which the vapour present in the air changes into water droplets. The level of temperature is different in different air masses. The height of this level is dependent upon the proportion of water vapour in that particular air mass. The proportion of water vapur is not the same in all air masses. The elevation at which the temperature of the air mass reduces and it becomes saturated is called condensation level.
- **Literacy :** The proportion of literate people in a region. It is expressed in percentage. It is understood to be an indicator of the social progress or development of the population of a region. The percentage of literacy is calculated from the population which is above 7 years of age.
- **Local Time :** The time of a place decided with reference to noon time. It is different at different longitudes.
- **Localisation :** When we establish industries, many factors affect its location. Supply of capital, nature and availability of raw materials, market, governmental policies, supply of labour, etc. affect the localization of industries.
- **Mantle:** The layer below the crust is called mantle. It is 2870 km thick. Out of the total mass of the earth, 84% lies in the mantle.
- **Map scale :** All maps represent the whole earth or part of it like a picture drawn to scale. The scale of a map is expressed as a ratio between the actual distance between two locations and the distance on the map between those two locations. Scales are of three types : verbal, numerical and graphical.
- **Moisture holding capacity:** The capacity of the air to hold vapour. This capacity changes according to the temperature of the air. Air having lower temperatures cannot hold much moisture. As the temperature of the air increases, its capacity to hold moisture also increases.
- **Non- agricultural land :** Land used for any other purpose except agriculture. This may include land used for roads, housing units, non-residential purpose, etc.
- **Ocean Floor:** The ocean bed also consists of undulating landforms like those on the land. There are submerged mountains at the ocean floor. Similarly, there are very deep trenches too. The Mariana trench is

around 11,000m deep. It is so deep that the highest mountain in the world, Mt Everest, will complete submerge in the deep. The age of any ocean floor is not more than 200 million years old. The mid-oceanic ridges and the trenches near the continents are geologically the most active parts of the ocean floor.

- **Ocean sediments:** The sediments deposited in the ocean are of three types: 1. Material formed due to erosion on the continents or material coming out from the volcanic eruptions occurring in the sea. 2. The coverings of the marine organisms (shells/ mollusks) 3. Material formed from the chemical deposition in the ocean water. The material formed on the continents is taken away from the coasts. The accumulation of sediments formed by the Ganga River is seen up to a distance of up to 2000 km.
- **Oceanic oozes:** The deposition of sediments in the deeper parts of the oceans is called oozes. They are made up of very fine clayey particles. At least 30% of this consists of the remains of the floating minute marine organisms. Oceanic oozes are found in deep sea, away from the coast.
- **Outer core :** The layer below the mantle is the core of the earth. This layer is divided into two sub –layers: inner core and outer core. The secondary seismic waves disappear at the boundary between the mantle and the outer core. These waves cannot traverse the core. On this basis, the scientists have inferred that the outer core is in a liquid state.
- **Ownership rights :** Actual and documented legal and theoretical ownership of any immovable or movable property. It means that the owner can decide how to use the given property.
- **Planned city :** Due to some political reasons or because of unprecedented growth of an existing city, a city is newly constructed after planning. Such cities are called planned cities. For example, before independence, Lahore was the capital of the province of United Punjab. After independence, Chandigarh was built as a planned city for the Punjab state in India. Tremendous growth of Mumbai led to establishing "Navi Mumbai" . At present, Amravathi is being built as a planned city for Andhra Pradesh.
- **Property Card:** Document showing the registration of a property in the urban area. This document is available with the local self governments ( Municipal council, municipal corporation, etc )
- **Relative humidity :** The percentage of water vapour present in the air at a specific time and place. It is the ratio between the maximum capacity of the air to hold the moisture at the given temperature and the amount of water vapor actually present in the air.
- **Representative Fraction:** A type of scale. It is also known as numerical scale. The ratio between the distance on the ground and the distance on the map is expressed as fraction. As this fraction represents both the distances, it is called representative fraction. The numerator shows the distance on the map while the denominator shows the actual distance between two points.
- **Revenue department:** The department of the government that handles the taxes obtained from citizens and industries, registers property holdings, Satbara, etc. Each state has its own independent revenue department.
- **Rotation :** the act of moving around one's own self. All spherical celestial bodies in space have the momentum to rotate around themselves. It can be said that they get the spherical shape because they rotate around themselves.
- **Saturated air:** When the air can hold as much moisture as it can at a given temperature, it is known as saturated air.
- **Sex Ratio :** The proportion of females in comparison with the males is called sex ratio. It is expressed with reference to per thousand males. For example, the sex ratio of Haryana is 879 while it is 1084 for Kerala.
- **Small scale map:** Type of map on the basis of scale. These maps give general

information about large areas. Generally, scales with representative fractions less than 1:10,000 are said to be small scale maps. The maps of states, countries, most maps given in the atlases, etc are examples of small scale maps.

- **Smog:** In heavily industrialized cities, the air becomes polluted and this leads to mixing of smoke and fog. In large cities too, smog is formed by smoke from vehicles. Smog is an amalgamation of Smoke+Fog = smog.
- **Solar Winds :** The flow of charged particles coming out of the higher part of the sun's atmosphere. This consists of mainly electrical atoms, very fine particles and alpha particles. Interplanetary magnetic field is a part of the solar winds. There is a change in their density, temperature and velocity with time. Because of extreme energy in its particles, they are free from the gravitational force of the sun. At a little distance away from the sun (expressed in multiples of radius), the velocity of the solar winds is more than the velocity of sound waves. It can be somewhere between 250 to 750 km/ sec.
- **Standard Time :** The time assumed according to the central meridian of a country. This time is determined on the basis of the longitude passing through the centre of the country and all the places in a country use this time.
- **Submerged Mountain:** There are many submerged mountain ranges on the ocean floor. Out of these, the Mid Atlantic Ridge is the longest and continuous range extending upto 65000km.
- **Suburbs :** In large cities, there exists a space crunch when the population and transactions in the cities increase on a large scale. The land prices also are not affordable to common people. Also, one starts getting a feeling of avoiding the city life. In such cases, the residents of city start settling away from the city. With time, such settlements expand and become suburbs of the large cities.
- **Transition :** The concept of transition is related to space/ region, time and various circumstances. When changes occur spontaneously, the boundaries are clear in the region or time where changes are occurring. But when the changes are slow, the boundaries are not very clear and take up a larger space and time.
- **Units of measurement:** Values used to measure the characteristics of objects or materials. Centimeter is a unit of measurement for length; gram is for weight while year, month, hour or minutes are units of measurement for time.
- **Working population:** The active component of a population. Out of the total population of a region, people belonging to the age group of 15 to 59 are engaged in some form of employment or business and are earning. Therefore, this age group is considered to be the working population. People belonging to the age group of less than 15 years and more than 59 years are considered to be the dependent population.

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## Do it!

A world map is given on the next page. Cut it along the dotted lines. Paste the cut map on a hard cardboard. Now make a cylinder out of this map. While making a cylinder, make sure the $180^0$ longitudes on the left and the right sides are superimposed on each other. Keep in mind that the longitudinal interval is $15^0$ each in this map.

On the same page, a strip showing hours is also given. On this strip, 24 hours have been shown with one hour markings. The 0 and 24 hour markings show midnight while the 12 hour marking shows noon. Cut this strip too and make a cylinder out of it. Make sure the 0 and 24 hour markings are superimposed on each other while doing so.

**To do the above mentioned activity, understand the steps along with the pictures given alongside.**

When you match the marking of any time with any longitude on the map, you will know the time at the other longitudes. With this moving strip and the cylinder, you can play the game of 'local times'.

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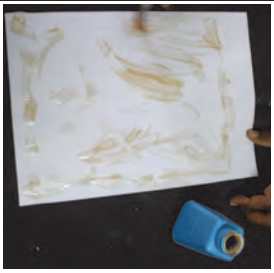

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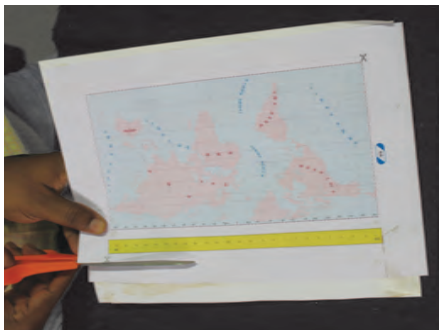

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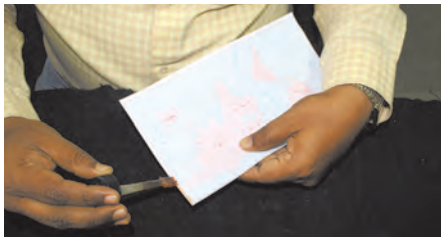

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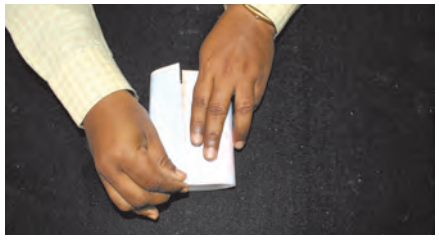

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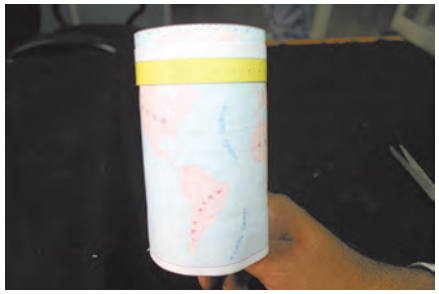

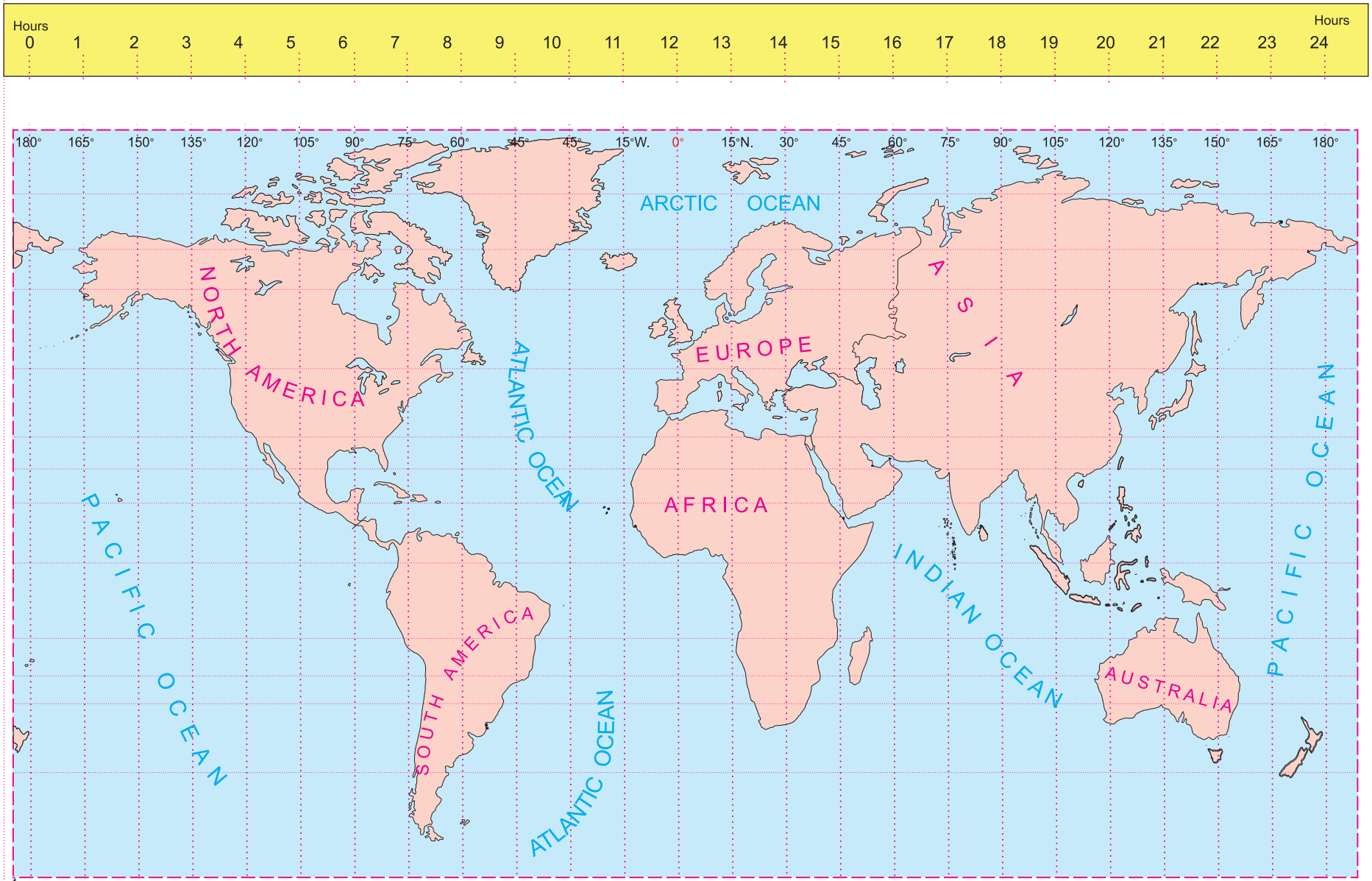
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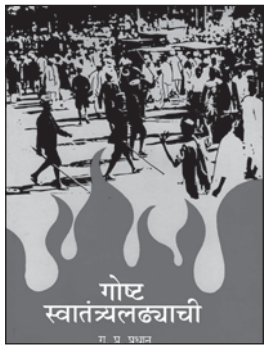





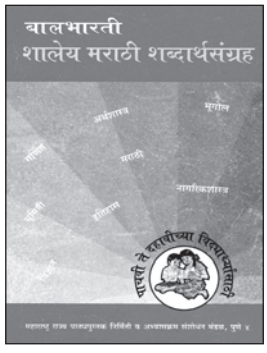


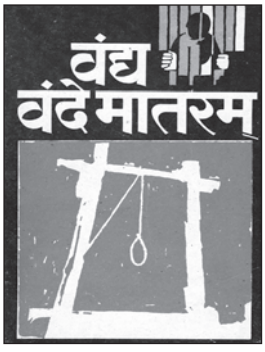




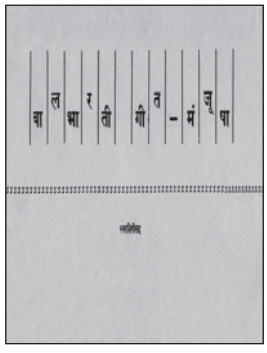


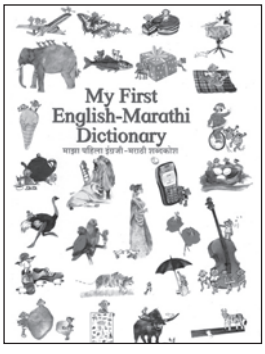




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