UNIT 11  HUMAN INTERACTION WITH ENVIRONMENT

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11.1 INTRODUCTION

The unit discusses the human interaction with the environment. It describes the human population in relation to its growth, distribution, density, food supply and the role of human beings in the ecosystem. While dealing with the human occupations — primary, secondary and tertiary, it also deals with human interaction in environmental degradation. There is also a brief description on natural regions of the world and human response to these regions.

While discussing about methodology in teaching this unit it provides ample opportunities for framing instructional objectives and strategies to achieve them. The evaluation items expose to different modes of evaluation helping to frame your own items suitable to your environment. It is always desirable to form your own teaching-learning strategies to achieve the intended instructional objectives using the locally available resources.

11.2 OBJECTIVES

At the end of the unit, you will be able to:

- identify major concepts, terms etc. presented in the unit;
- explain the meaning of the concepts, terms etc. presented in the unit;
- write instructional objectives;
- find alternate teaching-learning strategies;
- prepare instructional aids;
- formulate evaluation items;
- successfully use different learning strategies; and
- develop map skills.
11.3 CONTENT

11.3.1 Human Population

Human population is a great resource to any country. Its activities have had their impact on the environment. Though the total population of the world has crossed 5500 million in July 1992, the distribution of population has all along been quite uneven. More than 90 percent of the population live in northern hemisphere. When we look at the map of the world distribution of population, we can locate three major regions on the basis of density of population - sparsely populated (less than 50 persons per square km.), moderately populated (50 to 100 persons per square km.) and densely populated (more than 100 persons per square km.).

Sparsely populated regions include 80 per cent of the land area — forest, deserts and mountainous regions. Moderately populated regions are located in central and southern Europe, coastal low-land regions in mid-latitudes of South America and Southern Africa. These are mainly extensive agricultural countries with some industrial development. Densely populated regions include eastern and southern Asia which are agricultural low lands and north-west Europe and north eastern, U.S.A., that are highly industrialised and urbanized.

The distribution of population is affected by physical features, climate of the region, industrialization, and cultural and political factors.

The pattern of distribution of population is the result of growth and spread of population in the past. In the beginning of human history the population growth was low. But gradually with the spread of agriculture and advancement in the field of medicine population increased. New settlements came up with increased population due to the opening of new lands in North America, South America and Australia. The population also grew due to higher birth rate compared to the death rate.

On the basis of population growth and industrial development we can divide the earth into developed countries and developing countries. The developed countries in Europe, North America, Australia and Asia have very low population growth i.e., less than one per cent per year with a decline in birth rate along with death rate. The developing countries in Asia, Latin America and Africa have a high population growth i.e., more than two per cent per year. These countries have a decline in death rate but an increase in birth rate. Though the rapid population growth has resulted in environmental degradation, with economic development and increase in spread of education, these are likely to have a low population growth in future.

Food is a basic need of man. Human beings are at the top of the ecological pyramid with increasing pressure of population on the land. Though the primary productivity is low in deep oceans, deserts and polar regions, it is high in shallow seas, lakes, forests and coastal plains. Plants form the primary producers of food. There is a need to increase primary productivity of the land by cultivating two to three crops a year. Forests being a cover of perennial vegetation humans should discover new food sources from trees that would provide inexhaustible source of food. Animals are found in the second level of the ecological pyramid. As the ecological efficiency is about 10 per cent from plants to animals, to support the existing population we have to either bring more land under plough, if people prefer animal food or people need to be vegetarian to support more population on a given area of land.

Though there is an increase in the world’s total food supply, about 500 million people are suffering from malnutrition. Hence, there is a need to increase food production. As there is greater scope for increasing the productivity of the land under cultivation, there is a need to find ways and follow them. Wastage of food grains before and after harvest need to be reduced. It is also seen that we have not fully utilized the enormous food resources of the oceans and inland waters. As such, there is a need to find the different ways of making optimum use of these resources.

Though many countries are self-sufficient in food production scarcity occurs in some years mainly due to natural hazards. Even movement of food from surplus nations to deficit nations is obstructed due to political, economic and social barriers. As such a solution to food problem depends both on the understanding of the ecological processes and sharing mindedness of the nations with surplus food.
Check Your Progress

Notes:  
(a) Space is given below for your answers.  
(b) Compare your answers with those given at the end of the unit.

1. Name the factors which affect the distribution of population in the world.

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11.3.2 Human Occupations

Human beings take up different economic activities to survive on the earth. They follow division of labour either by engaging in food production, manufacturing goods or other services according to the needs of the community. These economic activities are broadly classified into primary occupations, secondary occupations and tertiary occupations.

Primary occupations include agriculture, animal rearing, lumbering, fishing and mining. The products are obtained directly from nature. With the use of modern technology the productivity of primary occupations has increased. Even to this day there are tribal communities in some parts of the world who migrate in gathering food from plants, hunting animals and birds and fishing. They use simple instruments in their daily life. But they need a large area for supporting each community as most of their requirements are met from the local environment.

Agriculture is a widely practised economic activity. People in the dense forests follow shifting agriculture. They grow root crops that can be stored easily for long periods. With the extension of transport facilities into the forest, the contact with the external world has changed life style of the forest people. Gradually farming resulted in permanent settlement of people at a place. Though it started as subsistence type, it has been developed into commercial agriculture. Plantation agriculture is practised in some countries.

Animal rearing is one of the main human occupations. People living in different environments have domesticated different animals. They are mainly nomads. The Kirghiz of central Asia, the Fulani of Nigeria, the Masai of East Africa, the Gaddis of Himalayas and the Bedorious of Sahara are some of the communities who are nomads. In recent times animal rearing is undertaken on scientific and commercial lines. Machinery is used intensively in farming and processing of milk and meat.

Lumbering has developed well as a primary occupation mainly in the coniferous forest regions of North America and Europe. By the use of machinery and planned utilization of forests in these regions lumbering has been commercialized. However, the tropical forests are not fully utilized due to natural hazards and unsystematic planting of trees.

In mid-latitudes fishing is highly commercialized. While trawlers catch fish and floating factories process and pack the catch, the refrigerated ships export them to distant countries.

Mining is a dangerous and equally profitable occupation. Mining may become uneconomical once the minerals start getting exhausted.

Apart from mining people are employed in processing and refining the ores. These units are located normally near the consuming centres. The number of people employed in mining and related occupations depends on new mining centres, demand for ore, cost of ore and many more factors.
Secondary occupations are the results of need for processing of primary products. For example, people are engaged in production of sugar from sugarcane. The range of secondary occupations depends on availability of raw materials, skilled workers etc. In large scale and small industries there is division of labour with highly specialized workers but in cottage industries we find artisans making handicrafts out of local materials. The development in secondary industries has influenced the modernisation of primary occupations.

Tertiary occupations are the outcome of the growth of industries and demand for professional services. People in tertiary occupations are equally contributing, like the people in the primary occupations, in the production of various commodities. They are greater in number in urban areas than in rural areas. These occupations are in the field of education, health, trade, communications etc.

Though people are engaged in primary, secondary and tertiary occupations, the occupational pattern differs from developing countries to developed countries. While the developed countries have ample job opportunities and more working population than the dependent population, the condition in developing countries is vice-versa.

Check Your Progress
Notes: a) Space is given below for your answers.
       b) Compare your answers with those given at the end of the unit.

2. How are economic activities classified into?

3. Give at least two examples from primary occupations and tertiary occupations.

11.3.3 Environmental Degradation

The impact of human beings on the environment and the environment on the human beings has been changing from time to time and place to place. Though the early human beings adopted themselves to the environment, once the human beings started making tools, their impact on the environment came to be felt. The industrial revolution provided opportunities to modify the environment. The invention of preventive and curative steps to fight diseases resulted in higher longevity.

As a result population increased and people realized their impact on environment degradation. The growth of human needs and faster development of resources have resulted in degradation of environment. The decline of the early civilizations are attributed to deforestation, which gave way for soil erosion; floods silting of irrigated canals. Even the construction of dams results in serious consequences.

The growth of population and subsequent increase in consumption has resulted in rapid depletion of all kinds of resources. For example food deficit is faced by about 100 countries in the world owing to deforestation, soil erosion, lowering of water table and lack of fodder for animals. As a result people are easily prone to diseases.
Forest and soil resources are also getting depleted at a faster rate and are gradually becoming non-renewable resources. The resources like mineral and power which are unevenly distributed are being consumed at a faster rate owing to increasing demand. This has resulted in energy crisis. Due to sheet erosion land is being degraded and made unsuitable for use. The cultivated land in some regions is exposed to deposition of course material and sand during high floods or due to wind action. This has caused irreparable damage to cultivated land.

Man's impact on the environment has resulted in pollution of environment — air, water, land and organisms in the biosphere. There is a reduction in the capacity of the natural ecosystem to decompose dead organisms or excreta and recycle them. This has resulted in pollution of the environment.

Air pollution is a global issue. The burning of fossil fuels in large quantities and deforestation has increased the carbon dioxide content in the atmosphere and has resulted in increasing the atmospheric temperature. The burning of coal and oil also adds many chemicals to the atmosphere resulting in respiratory diseases. It also results in acid rains affecting terrestrial and aquatic ecosystems. The ozone layer in the stratosphere has been affected by exhausts from aircraft. If the ozone layer gets depleted and the harmful ultraviolet radiation enters the earth’s surface it may cause many incurable diseases.

Water pollution takes place mainly when effluents from factories and disposal of sewage are let into rivers and seas. These effluents seep through and pollutes underground water and river water. Polluted water affects human population by causing water borne diseases. Water pollution also occurs owing to use of fertilizers and pesticides in agriculture. In the open oceans oil-spills from tankers affect marine life. There is a felt need to improve the quality of environment as the survival of human beings depends on this harmony with the environment.

Hence, there is an urgent need to control soil erosion, avoid silting of rivers and increase afforestation. Therefore, steps are required to be taken to conserve resources, reduce population growth and wasteful consumption and make the earth habitable for future generations. This would solve the environmental problems resulting in ecological balance.

Check Your Progress

Notes:  
- a) Space is given below for your answers.
- b) Compare your answers with those given at the end of the unit.

4. What is the impact of deforestation on the environment.

5. How can ecological balance be maintained?
11.3.4 The Natural Regions

The natural region is one in which climate, soils and natural vegetation are homogeneous. The distribution of major climatic types provides a basis for division of the world into major natural regions. Though there are striking contrasts between a few adjoining regions, the line of demarcation is not abrupt or well deprived. The boundaries between the regions are broad transitional zones in which dominant features of one region gradually disappears giving place to those of the adjoining regions. As the natural vegetation is a visible index of climatic conditions, major natural regions are named after the prevalent natural vegetation. A study of these natural regions indicate how natural regions help in the study of world Geography.

Equatorial Region

This region has hot and wet climate with minimum seasonal contrast. It has red and yellow leached soil with low fertility. The natural vegetation consists of tropical evergreen forests with a variety of tall hardwood trees.

Human dwellings is very poor in these equatorial regions except in some accessible tracts — navigable rivers and major roads. Amazon and Zaire bases are inhabited by tribes with low density of population. They practise food-gathering, hunting, fishing and shifting agriculture. But in Java and Indonesia, people practise agriculture due to highly fertile volcanic soil and the density of population is very high. However in Malaysia, Sri Lanka and Indonesia plantation agriculture is practised in the same environment.

Tropical East Margin Region

This region consists of tropical deciduous forest and is located along the eastern margins of continents between 10°N and 30°N and 10°S and 30°S. Parts of this region experience monsoon climate having seasonal reversal of winds. Rainfall is generally limited to summer season. While the river valleys have fertile alluvial soil, the rest of the region have laterite soil. The forests yield timber, bamboo and other forest products.

The river valleys with abundant water supply and fertile soil are intensively cultivated by people. However, inaccessible forests are inhabited by various tribes. Some forests are cleared for plantation of tea, coffee and rubber.

Tropical Grassland Region

This region experiences extremes climates with moderate rainfall being in the interior of tropical belts. Coarse tall grass grows here extensively and this regions is inhabited by both herbivores and carnivores animals. National parks have been established to protect wild life and attract tourists. Lanas and Campos in South America and Savanna in Africa are well known tropical grasslands.

Animal rearing is the main occupation of the people in the grasslands. They are reared for their products. Masai of East Africa, Hausa of Nigeria are well known tribes for cattle rearing.

Tropical Deserts

These deserts are located in the western margins of continents in the Trade Wind belt. The daily range of temperature is very high. Because of very low precipitation, thorny scrub and bushes grow in the sandy soil. Date palms and small cultivated patches of land can be seen in oases.

The Gulf countries are economically developed due to drilling of mineral oil. The Indus Valley in Pakistan, Imperial Valley in California and Nile Valley in Africa have permanent rural agricultural settlements due to modern irrigational facilities.

Mediterranean Region

This region is located poleward of the tropical deserts on the western margins of continents. There is warm dry summer and cool winter with short period of moderate rainfall. Natural
vegetation consists of short evergreen trees, bushes and scrubs. These are found around the Mediterranean Sea, Coastal California, Central Chile, South-west coast of Australia and cape coasts in South Africa.

People practice cultivation in the coastal planis. The hill slopes are intensively used due to favourable climatic conditions for growing fruits.

Mid-Latitude Deserts

These are located in the interior plateaus and basins in Asia and South America surrounded by high mountains. This region experiences extreme temperature with scanty precipitation. Tibet, Gobi, Patagonia are examples of mid-latitude deserts.

The highlands of these regions are inhabited by pastoral nomads. Agriculture has developed in low lands with irrigational facilities. This has resulted in a few isolated settlements. A few mining centres are also located in these deserts.

Mid-Latitude East Margin Region

While the eastern margins of the continents in the sub-tropical belt are warm, the polewards are cool. These regions have warm wet summer and dry winter. The natural vegetation consists of a mixture of deciduous and evergreen in warm lowlands and coniferous in the high altitude and higher latitude regions.

The land is intensively used whenever there is favourable condition for agriculture. Lumbering, fishing and dairy farming are also important occupations of the people. High density of population is found in highly urbanised industrial centres.

Mid-Latitude West Margin Region

This region has rainfall throughout the year due to the influence of winterlies. While the deciduous are found in the lowlands, the coniferous are found in the high altitudes.

The forests in the north western part of Europe have been cleared for human settlements making optimum use of resources. People practise mixed farming and market gardening, fishing, lumbering and sheep rearing are other economic activities.

Mid-Latitude Grassland Region

These regions are located in the interior of continents in the temperature zone. There is high annual range of temperature with scanty rainfall in summer. The natural vegetation is predominantly short grasses. Steppes in Eurasia, Pampas in Argentina are examples of such temperate grasslands.

A large part of the fertile grassland is cleared for intensive mechanized farming on commercial lines. Along with farming people also have developed pastoral industry on commercial lines.

The Taiga Region

This region occurs as a broad belt in Europe, Asia and North America between the Tundra and the Mid-latitude grassland. It has short warm summer and long cold winter. The forests consist of softwood coniferous trees with needle-shaped leaves.

Lumbering and replanting the cleared areas is the main occupation of the people. Cultivation and fishing are done in short summers. Hunting of fur bearing animals is also practised by people.

The Polar Region

The Polar region is located between the Arctic circle and North Pole in the north and Antarctic circle and South Pole in the South. Except during short summer most of the region is covered by ice. The vegetation consists of mosses, lichens and sedges. Reindeer, wolf, fox and seal are common animals. Penguins are the familiar birds of Antarctica.
The harsh environment discourages permanent settlement. Hunting, fishing, glass house cultivation and trading are the main occupations. This Tundra Region has extremely low population density.

High Mountain Region

High mountain regions like the Himalayas, the Alps, the Rockies and the Andes cover extensive areas. The climatic conditions and vegetation in these regions vary according to latitude, exposure to wind and rainfall.

Lumbering, animal rearing and mining are important occupations. Cultivation is important in the valleys. While some hill stations are tourist centres, some are known for the artisanship of the people.

The natural regions thus help us to know their locations, climate, vegetation, life of the people, natural resources and many more. A detailed study of these gives us information about physical and economic geography of the world. It also develops a sense among the people to preserve the environment for future generations by making a judicious use of the bounty of nature.

Check Your Progress

Notes: a) Space is given below for your answers.

b) Compare your answers with those given at the end of the unit.

6. Differentiate between tropical deserts and mid-latitude deserts.

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7. Fill in the blanks.

i) Lanas and Campos in South America are well known .................. grasslands.

ii) Mediterranean region is favourable for growing ......................

iii) Amazon and Zaire bases are part of ..................... region.

11.4 INSTRUCTIONAL STRATEGY

Instructional strategy for this unit includes instructional objectives, teaching-learning activities and evaluation items.

11.4.1 Instructional Objectives

The students will be able to:

- identify the densely, moderately and sparsely populated regions of the world,
- give reasons for uneven distribution of population,
- distinguish between developed and developing countries, between immigration and emigration,
- compare ecological efficiency in the past with that of the present,
- distinguish between birth rate and growth rate of population,
Teaching of Geography

- specify the different ways of making the full use of food resources — land and water,
- reason out the need for better understanding among the nations for reducing food shortage,
- identify the major types of human occupations,
- describe the importance of primary occupations,
- give reasons for the rise of tertiary occupations,
- distinguish between primary and secondary occupations,
- prepare aids indicating primary, secondary and tertiary occupations,
- classify the given occupations into primary, secondary and tertiary,
- compare the occupational pattern of developed and developing countries,
- give reasons for environmental degradation,
- describe the depletion of various resources,
- explain energy crisis,
- find relationship between population growth and environmental degradation,
- classify the given resources into renewable and non-renewable resources,
- give meaning of the terms, ‘deforestation’, ‘afforestation’, ‘degradation’, etc.,
- explain the meaning of the term ‘natural’ region,
- mention the factors which affect natural vegetation,
- name the different natural regions of the world from the map,
- locate the different natural regions on the world map,
- describe the features of each of the natural regions and explain human response to it,
- distinguish between Taiga and Tundra, and Tropical grassland and mid-latitude grassland,
- compare the location and natural environment of Tropical deserts with those of mid-latitude deserts.

11.4.2 Teaching-Learning Activities

Human Population

To begin with students have to learn about different aspects of human populations and its impact on the environment. So you can give a brief description about the growth of population from the past to the present. Show the World map on population distribution to the class and ask the questions written below.

- Name the three major regions based on density of population.
- What is the average density of population in these regions? Ask the children to look at the physical, climate and industrial map of the world. Ask the following questions:
  - Why are some regions thinly populated?
  - Why are some regions densely populated?

Like this a discussion can continue on uneven population distribution of the world.

Activity

- What activity would you give to the students to find out whether they have understood the reasons for uneven distribution of population in the world?

Let us now introduce the terms ‘immigration’ and ‘emigration’ to the students by leading the class into a discussion with the following questions:

- What are the different reasons for population increase at a given place?
- How does migration of people increase the population of a place?
- Does migration of people decrease the population of a place?
1. Suppose 10,000 people of U.S.A. migrate to Canada, which country has a decrease in population and which country has an increase in population.

Now you can tell the class that 10,000 people getting into Canada is called 'immigration'. It increases the population of immigrant country.

**Activity**

- How would you explain the term 'emigration' to the students?

On the basis of population growth and industrial development the earth is divided into developed and developing countries.

**Activity**

- Describe the features of developed countries.

We know that ecological efficiency ranges from 5 to 20 per cent. Hence it is said that the land can support more vegetarian population than non-vegetarian population on a given sample of land.

**Activity**

- How do you describe the above statement to the students?
- Give an example. What activity would you like them to perform?

As it is not easy to change food habits we need to make some adjustments between the different countries of the world.

**Activity**

- Describe how you would explain to the students that understanding among the nations of the world can overcome food deficit.

It is understood that we are not making the optimum use of food resources of land and water. There are various ways of making optimum use of them. These need to be identified and used.

**Activity**

- One of the instructional objectives of giving above knowledge is that 'the child develops awareness about, food resources not being optimally used'.

Write two more instructional objectives that you like to achieve by teaching the above content.

**Human Occupations**

This shows that there is a need to take up different occupations to make the best use of available resources. There are three major types of human occupations. They are primary, secondary and tertiary occupations.

Primary occupations can be introduced to the students following the strategy given below. Let the students list out some of the things which they get directly from the nature like fish, timber, minerals, food grains etc. Then ask them to write the work that people need to do to obtain them from nature. Example: mineral, mining, and fishing. Then tell the children that these works are called primary occupations. Let them list out the features of primary occupations.

**Activity**

- What teaching aids would you use to teach about modern method of cultivation?

As the children already know about olden methods of cultivation they should be able to distinguish between modern and olden methods of cultivation.
Teaching of Geography

Activity

- What strategy would you follow to introduce the term ‘Plantation agriculture’?

Display the world maps of occupations and natural vegetation. Let the students find out the major occupations of the people in accessible forest regions. Allow them to discuss on ‘how is it possible to make continuous use of forests’.

Activity

- What maps and pictures would you use to draw from the students ‘why a large forest resource is not fully utilized’.

Now ask the students to locate regions with animal rearing on the occupations map of the world. Ask them to find the reasons for taking up this occupation in those regions. (Take the help of physical, climate and rainfall maps of the world).

Activity

- In what ways do you provide opportunities to the students in gathering information (written and visual) about ‘commercialisation of animal rearing’.

Fishing and mining are also important primary occupations of the people. Ask the students to collect pictures, literature, maps as samples giving details of those occupations in the world.

Activity

- Write a few evaluation items that you would use to find out the understanding of students on fishing and mining.

Give a few examples of secondary occupations like production of sugar, making cotton cloth, preparing steel. Ask the following questions to the students.

- What are the basic raw materials required for the preparation of the above goods?
- From where do we get those goods?
- What are those goods which we get indirectly from nature called?
- Then what are secondary occupations?

Activity

- What instructional objectives would you frame while teaching secondary occupations?
- Write evaluation items to find out the achievement of the above objectives.

Secondary occupations are normally skilled tasks. “The secondary industries have helped in modernizing primary industries”. How? Allow the class to discuss on above topic.

Activity

- Write in brief how you would conduct discussion on the above topic.

Tertiary occupations are occupations of services rendered to the people. They normally demand for professional services. Example: Professional service rendered by the doctor.

Activity

- Give some more examples of tertiary occupations.
- Write any two instructional objectives that you like to achieve by teaching about tertiary occupations.
To teach the topic on human occupations various teaching-learning aids can be used. Example: chart of human occupations.

What other teaching-learning aids can you use to teach the topic on human occupations?

Environmental Degradation

Environmental degradation is an important negative impact of humans on the environment. The industrial revolution and progress in medicine have indirectly affected the environment.

Activity

- In what ways have industrial revolution and progress in medicine affected the environment?
- What is environmental degradation?

It is also said that deforestation is an important factor in the decline of early civilizations.

Activity

- What additional knowledge would you like the students to acquire with regard to relationship between growth of population and environmental degradation?

Depletion of resources is an important phenomenon. Various resources like soil, forest are getting depleted at a faster rate.

Activity

- What strategy would you follow to help the students to know about depletion of resources?

There are renewable and non-renewable resources located in the environment.

By giving examples of renewable sources like water, forest, soil you can get the features of renewable resources from the students. Then you can ask them to explain the meaning of the term renewable resources.

Activity

- How would you introduce the term ‘non-renewable resources’ to the students?

Air pollution and water pollution are global issues.

There are a number of reasons for this pollution. They can also be controlled by human beings. Organize a discussion to draw the ideas about pollution.

Activity

- What aids can be used to discuss the air pollution and water pollution and make discussion interesting.

What attitudinal changes would you like to bring about in students by teaching environmental degradation.

The Natural Regions

Natural regions are different physical divisions on the earth in which climate, soil and natural vegetation are homogeneous. The boundaries between the regions are broad transitional zones. As the natural vegetation is a visible index of climatic conditions, major natural regions are named after the prevalent natural vegetation.
Teaching of Geography

Activity

- The natural regions are required to be named by the students themselves. What teaching aid is to be used?

- Which instructional objective is achieved if the students name the natural regions?

The topic can easily be taken up as ‘Project Work’. The class has to be divided into 12 groups of 3 to 4 students each. Allot one region to each group. Ask the students to collect literature, pictures, maps, samples etc., about their region. Give them adequate time with directions to complete the work. Use about three periods for the presentation of the project work by all the groups. Let every member of the group participate in doing and presenting the project work.

Activity

- You are required to guide the students in successful completion of their project. How would you guide them?

- What social and behavioural changes do you expect in students as a result of group work.

After the students complete their presentation of the projects, ask them to find out how the study of natural regions would help in understanding World Geography. Example: When we study about the mid-latitude grasslands we will come to know about the soil type, rainfall, climate, human occupations, density of population etc., of that grassland. There are, of course, different aspects of World Geography.

Activity

- How do you evaluate the understanding of students on Equatorial Region?

- In what ways do you use maps for this purpose?

- Suggest an alternate teaching-learning strategy to teach the topic ‘Natural Regions’.

11.4.3 Evaluation

i) Why is northern hemisphere more populated than southern hemisphere?

ii) Explain how a purely vegetarian diet would support more population on a given area of land?

iii) In what ways the nations can overcome their food deficit?

iv) Compare the population growth of developed with that of developing countries?

v) Give three examples for Primary, Secondary and Tertiary occupations.

vi) What are the advantages of commercialising animal rearing?

vii) How are Primary Occupations important? Explain with an example.

viii) Examine the effect of Industrial Revolution on the Environment.

ix) Give an account of depletion of resources.

x) In what ways can we control water and air pollution?

xi) What programmes can be taken up in schools to make the students aware of environmental degradation?

xii) Why is the region around the poles considered a natural region?

xiii) Describe the natural environment in Tropical grassland region.

xiv) Describe the climatic features of Mediterranean region.

xv) Distinguish between

   a) Taiga and Tundra
b) Primary and Secondary Occupations  
c) Emigration and Immigration

xvi) Give a technical term for each of the following:

a) Mid-latitude grasslands in Eastern Europe.
b) Tropical grasslands in Africa.
c) Industries which transform the primary products into products more directly useful to human beings.
d) Resources which are capable of being used over and over again and are capable of regeneration.
e) The average number of inhabitants living within a specified unit of area, such as a square kilometer.

xvii) Explain the meaning of the following terms:

a) Subsistence agriculture  
b) Shifting cultivation  
c) Death rate  
d) Afforestation

xviii) On the outline maps of the world locate/mark the following:

Prepare a Key and name them.

a) Any 4 natural regions of the world.
b) Any two densely populated and sparsely populated regions of Asia.
c) Two industrial centres and animal rearing regions of Europe.
d) Important latitudes of the Earth.

11.5 LET US SUM UP

By studying the unit we hope you are in a position to identify teaching points, frame instructional objectives and different types of questions, suggest alternate teaching-learning strategy and develop map skills among the students. You may also be confident of using different instructional aids, ensuring maximum pupil participation in the teaching-learning process.

11.6 UNIT-END ACTIVITIES

a) Pick up the unit 'Resources'. Write a plan to teach this unit in Project Method.
b) How does use of the aids increase pupil participation in the teaching-learning process?
c) Try to make an exhaustive collection of literature, statistics, samples, pictures and diagrams on Human Impact on the Environment.

11.7 POINTS FOR DISCUSSION

- Different ways of making judicious use of environment by human beings for themselves and future generations.
11.8 ANSWERS TO CHECK YOUR PROGRESS

1. The distribution of population in the world is affected by physical features, climate of the region, industrialization, and cultural and political factors.

2. The economic activities are broadly classified into primary occupations, secondary occupations and tertiary occupations.

3. Examples of primary occupations: Agriculture and Fishing.
   Examples of tertiary occupations: Education and Health.

4. Deforestation has serious impact on the environment. It gives rise to soil erosion, floods, silting of irrigated canals.

5. Ecological balance can be maintained by controlling soil erosion, increasing afforestation, conserving resources, reducing population growth and wasteful consumption.

6. Tropical deserts are located in the western margins of continents in the Trade Wind belt. The daily temperature is very high. It has very low precipitation. Mid-latitude deserts are located in the interior plateaus and basins in Asia and South America surrounded by high mountains. It has extreme temperature with scanty precipitation.

7. i) tropical
   ii) fruits
   iii) equatorial

11.9 SUGGESTED READINGS