Foreword

The National Teachers' Institute, Kaduna, was established in 1976 to provide in-service education for teachers through the open and distance learning system (DLS). As stipulated in Decree No. 7 (now Act No. 7) of the then Federal Military Government of Nigeria (1978), the Institute is **"charged with the duty of providing courses of instruction leading to the development, upgrading, and certification of teachers as specified in the relevant syllabus, using Distance Education techniques"**.

After several years of running the Nigeria Certificate in Education (NCE) programmes, the Institute deems it appropriate to upgrade the academic and professional qualifications of teachers to the degree level, in order to greatly raise the quality of teaching and learning in schools. Consequently, the Institute has embarked on offering degree programmes, in affiliation with the National Open University of Nigeria (NOUN), initially in the following areas:

(i) B.A. Ed. (English)
(ii) B.A. Ed. (Social Studies)
(iii) B.A. Ed. (Primary)
(iv) B.Sc. Ed. (Mathematics)
(v) B.Sc. Ed. (Integrated Science)
(vi) B.Sc. Ed. (Physical & Health Education)

In order to ensure the highest quality degree, existing course materials initially developed by NOUN in four (4) programmes of English, Mathematics, Integrated Science, and Primary Education were critically and expertly reviewed, updated, and upgraded by a team of seasoned academics from various universities across the country and the NTI. For programmes not available in NOUN, fresh course materials were expertly designed, developed, and produced by a core of experts in the areas of Social Studies and Physical and Health Education (PHE) ab initio. Furthermore, in order to ensure quality delivery of the degree programmes, course facilitators with the highest academic qualifications (Ph.D, M.Ed.) in the degree course programmes have been screened and employed to deliver the programmes to mature students along open and distance education lines, using best practice methods and techniques (learner-centred, participatory, and interactive approaches). The innovative techniques involve various media, which include ICT, audio-video, CD ROMs, and the net.

In order to further enhance quality, various facilities, such as science and PHE labs/workshops, library, etc are provided at the study centres.

For you to gain maximum benefits from the course materials, you are expected to study them very carefully/critically as well as acquaint yourself with their accompanying Study Guides. Furthermore, you are expected to work through the assignments in every unit/module in order to ensure full mastery of the contents

andconcepts presented in the course materials. This will help you in assessing your learning achievement as you progress towards your degree. I wish you the best.

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Published by:
National Teachers' Institute, Kaduna
2015

ISBN:

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STRUCTURE AND CHARACTERISTICS OF MAN'S PLACE

UNIT 1 A GENERAL OVERVIEW OF THE EARTH

CONTENTS

1.0 INTRODUCTION

The Holy Book records that God created two things before others, namely, Heaven and Earth. While, for now, the knowledge of what Heaven is like is beyond the immediate comprehension of most of us, the reality of the earth is not in doubt. We know it is 'Man place', the 'Place' where God created man last, to live in, after He had created vegetation, plants, water, animals and birds. Man was to have authority over these other things, and they are to serve man.

If there had been no 'place' or the earth, in the first instance, where would man have been? After all, we know, for now, that no man is in the other planets, the sun and others. We are told that man is now living in the moon. If there had been no earth, would there have been a school curriculum, world-wide, known as Social Studies which emphasizes man's interrelationship with the environment? Without the earth, would you be studying a subject called Social Studies?

This unit sets the stage to the entire Module 3 which is about the Structure and Characteristics of the earth, of 'Man's Place', the place where man makes a living. For a start, in unit 1, you would be introduced to general overview of what 'Man's Place', the earth, is.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- define the concept of the Earth;
- describe its main features; and
- explain its major characteristics.

2.1 HOW TO STUDY THIS UNIT

1. Bear in mind that you will be coming across geography concepts in the whole of this Module starting with unit 1. Try to master them.
2. Remember all through the Module, again, beginning with this unit that the Social Sciences form the market place where Social Studies draws its materials for instruction. You are not studying the Geography concepts for their sake, but to help you illustrate how man depends upon the many features of the earth for living and for survival.
3. Read over and over the contents, to master them.
4. Attempt the SELF ASSESSMENT EXERCISE and the TUTOR-MARKED ASSIGNMENTS in this unit.

2.2 WORD STUDY

Planet: the planet earth and everyone and everything in it.

Solar system: coming from the sun or relating to the sun.

Disintegrate(d): to be completely destroyed, by breaking into lots of very small pieces.

Medieval: relating to the period of European history between about the year 1000A.D and the year 1500 A.D.

Philosophy: the study of theories about the meaning of things such as life, knowledge and beliefs; the search for and love of wisdom.

Astrology: the study of the movement of stars and planets and how some people think they influence people's characters and lives.

3.0 MAIN CONTENT

3.1 The Earth

The earth is the planet in which we live. It is sometimes called the planet Earth. It is the land on which human beings live. It consists of inhabitants. It is the only planet on which life exists. It is the third planet of the solar system in order of distance from the Sun. The earth is the 5th largest planet in the solar system. The earth is also used to describe the land, the ground which consists of disintegrated rock particles, soil, moulds and hills. It is one of the 4 elements in ancient and medieval philosophy and in astrology.

SELF ASSESSMENT EXERCISE I

Summarise in your own words what you think the earth is.

3.2 The Earth's Features

1. The shape of the earth is not flat. It has a spherical shape.
2. Its surface area is approximately 443 million square kilometers (197 million square miles).
3. The structure of the earth is grouped into two zones: the outer structure and the internal structure.
4. The outer structure of the earth is made of 4 zones or layers (like an onion or shell). These zones or layers are the Atmosphere; Lithosphere; Hydrosphere and Biosphere. We would discuss these in detail in subsequent units.
5. The internal or outer structure of the earth is made up of three concentric layers which are the crust (Lithosphere); the mantle (Mesosphere); and the core (Barysphere).

SELF ASSESSMENT EXERCISE II

1. List the four components or layers of the outer earth.
2. List the layers of the inner earth.

1.3 Characteristics of the Earth

The fundamental characteristic of the earth is spherical shape. There are many ways to prove or show that the earth is spherical. These include:

1) Circumnavigation of the Earth: It is possible to go round the earth by air, land and sea and return to the starting point as carried out by Ferdinard Magellan and his crew between 1519 and 1522. If the earth is flat, one would come in contact with an abrupt edge and fall off.

2) Sunrise and Sunset: As the earth rotates from west to east, places in the east experience the sun earlier (sunrise) than places in the west. Also places in the west see the sun later (sun-set) than places in the east. The whole earth would experience sunrise and sunset at the same time if the earth is flat.

3) The Circular Horizon: When one views a distant horizon from any point of the earth, the shape is always circular. And as one climbs higher, the circular horizon widens. This type of feature is seen only on a spherical body.

4) Planetary Bodies: When the sun, moon, starts, and other planetary bodies are viewed from an angle, they are all circular in outline. So, the earth cannot be an exception.

5) The Lunar Eclipse: During lunar eclipse, the earth casts a circular shadow on the moon. Only a sphere, like the earth can cast such a circular shadow.

6) Aerial Photographs: Pictures of the earth taken from high altitudes by rockets clearly show the curve edge of the earth. This is the most recent proof of the sphericity of the earth.

SELF ASSESSMENT EXERCISE III

Write down 3 evidences or proofs of the earth's spherical shape.

4.0 SUMMARY AND CONCLUSION

In this broad survey of the earth, you have learnt that the earth:

- is the planet where mankind lives and struggles to survive
- is the planet where life exists
- is the land on which man carries out its multivariant activities.

That the earth is spherical with several proofs or evidences to that effect. And that the earth consists of outer and inner structures. The earth is 'man's place' in the true sense of the world.

5.0 TUTOR-MARKED ASSIGNMENT

Draw a well-labelled diagram of the structure of the earth, showing the Atmosphere, the Lithosphere (the Earth Crust) and the (Hydrosphere).

6.0 REFERENCES

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Wikipedia

UNIT 2 THE ATMOSPHERE

CONTENTS

1.0 INTRODUCTION

After describing the broad features of the planet earth in unit 1, you would now be taking a closer look at the earth's two main zones or component parts. We would begin with an analysis of the earth's outer structure, called the Atmosphere.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- define the Atmosphere;
- state the characteristics of the Atmosphere; and
- explain the importance of the Atmosphere to man.

2.1 HOW TO STUDY THIS UNIT

1. Recall that you are not being trained to be geographers. You are being trained to equip yourself with geography concepts, for your teaching in the Social Studies classroom.
2. Note that the concepts you are coming across in this unit are relevant and valuable in highlighting the core of Social Studies – man interaction with his environment.
3. Read over and over the contents, to master them.
4. Attempt the SELF ASSESSMENT EXERCISE and the TUTOR-MARKED ASSIGNMENTS in this unit.

2.2 WORD STUDY

Gas: a substance such as air that is neither a solid nor a liquid.

Environment: this is the bio-physical and social surroundings of man.
Radiation: this is the energy that comes from the sun rays and other objects in space.

Green house effect:this is the product of the trapping of radiation and water vapour from the sun rays that is reflected on the earth's surface.

3.0 MAIN CONTENT

3.1 The Concept of Atmosphere

Macmillan (2002:74) describes the atmosphere as 'the air round the earth'. Oxford Dictionary (2009:93) sees it as 'the envelop of gases surrounding the earth'. Colins Dictionary (2005:93) simply defines atmosphere as 'the gaseous envelop surrounding the earth.'

The atmosphere is thus a layer of different gases that extends from earth's surface to the atmosphere. The layers of the atmosphere are the troposphere, the stratosphere, the mesosphere, the thermosphere and the exosphere. The troposphere is the layer in which weather occurs and extends from the surface to about 16 kilometers above sea level at the equator. Above the troposphere is the stratosphere, which has an upper boundary of about 50 to 90 kilometer is called the earth's atmosphere can be divided into layers. Blatt etal in Kadiri, et al [2011] see these layers as mainly determined by weather, temperature increases or decreases with altitude. The stratosphere extends from the troposphere to about 51 kilometers. It is the boundary between the stratosphere and the mesosphere, typically is at 50 to 55 kilometers.

The atmosphere is a mixture of nitrogen (78%), oxygen (21%) and other gases (1%) that surround the earth. Most of the weather and clouds are found in this first layer. The atmosphere is an important part of what makes earth livable. It blocks some of the sun's dangerous rays from reaching earth. It traps heat, giving the earth a comfortable temperature. The oxygen within atmosphere is essential for life.

SELF ASSESSMENT EXERCISE I

Describe the word Atmosphere in your own words.

3.2 Characteristics of the Atmosphere

1. The atmosphere is the gaseous portions of the earth.
2. It is a layer of gases surrounding the earth.
3. Over 99% lies within 30km of the earth surface.
4. Its density decreases progressively with elevation.
5. It contains water in form of vapour in lower layers.
6. Weather phenomenon – cloud, rain and snow – are largely confined in the atmosphere.
7. It contains 78% Nitrogen, 21% Oxygen, 0.03% Carbondioxide and 0.97% rare or inert gases.

SELF ASSESSMENT EXERCISE II

List 4 characteristics of Atmosphere.

3.3 The Importance of the Atmosphere to Man

From the perspective of the planetary geologist, the atmosphere is an evolutionary agent essential to the morphology of a planet. The wind transports dust and other particles which erodes the relief and leaves deposits (eolian processes). Frost and precipitations, which depend on the composition, also influence the relief.

The weather exists by constant circulation of water to water vapor of rain to water. This cycle causes, as a result of changes in temperature and circulation of air (wind), erosion of the earth's surface. By erosion the outside of the earth changes through the years.

For a meteorologist, the composition of the atmosphere determines the climate and its variations. For a biologist, the composition is closely dependent on the appearance of the life and its evolution. Without atmosphere life would be impossible. It gives us air to breathe and protects us from meteorites and ultraviolet rays from the sun.

The atmosphere absorbs so much heat that temperature on earth are possible. It gives us air to breathe and also protects us from the ultraviolet rays of sun. It absorbs heat that temperatures on earth are such that life becomes possible. The weather, that exists by the circulation of water to vapor, to rain to water again.

The atmosphere is the source of every living thing in the world, it plays a very important role in serving the world's need and it supports the earth and it's consisting elements. It provides ventilation to the earth because the atmosphere filters the ultraviolet rays coming from the sun which causes the living things in the world to die, it also gives the air we breathe, the food we eat and the water we drink and above all it supports life.

The atmosphere is the envelope of gases that surrounds the earth. The gases protect the earth against unfavourable attacks from other solar systems. Earth's atmosphere makes conditions on earth suitable for living things. The atmosphere contains oxygen and other gases that living things need to survive. It protects living things from radiation of sun. Atmosphere also prevents earth's surface from being hit by meteoroids or rocks from outer space. So imagine the world without the atmosphere, it will be better to live on any other planet rather to live on the earth! Living things would probably die from living on earth. It protects us from ultra violet rays of the sun. It also protects us from the meteors. Without the atmosphere, the earth's surface will look like the surface of the moon (full of craters).

The layers of atmosphere are very important for living beings because it reflects some of the heat of the sun and some is also absorbed by it. Atmosphere serve as an umbrella which protects us from harmful UV rays that results to melanoma, a skin

disease. Atmosphere does not only protect us from it, it also holds the air locked. Living organisms are, mostly, confined to the parts of biosphere that receive solar radiation during the day. The chemical reaction involved in the process is as follows:

Photosynthesis thus provides food for us to eat and oxygen for us to breath. Here, the carbon and oxygen supplied by carbon dioxide remain in living matter until death. Only after decomposition of the living matter, the CO_2 returns to the atmosphere to complete the cycle. At this point we should remember that photosynthesis occurs only in chlorophyll bearing organisms, namely, green and purple bacteria, blue green algae and the vast population of higher plants.

Oxygen, an important constituent of the atmosphere, enters the living world through respiration, which is a familiar process in both plants and animals including man. Through it, glucose molecules are converted into energy needed for various activities. Respiration and photosynthesis together form a cycle called photosynthesis – respiration cycle, which can be depicted as following:

Carbon dioxide of the atmosphere is replenished not only through the process of respiration or biological oxidation but also through combustion of fuels and volcanic eruptions. The other important constituent in this cycle is water.

Nitrogen is also an essential component of living systems. It is required by organisms for the synthesis of proteins, nucleic acids, and other nitrogenous compounds. In nature, atmospheric nitrogen is fixed by specialized organisms. There are industrial processes to convert atmospheric nitrogen into fertilizers.

Movement of materials through living organisms involves many more substances than those contained in water and carbon dioxide. In addition to carbon, oxygen, hydrogen and nitrogen, all organisms need phosphorus, sulphur, sodium, potassium, calcium, magnesium, iron, manganese, cobalt, copper, zinc and probably chlorine and some certainly use of special functions, aluminium, boron, bromine, iodine, selenium, molybdenum, vanadium, silicon, strontium, barium and possibly nickel.

SELF ASSESSMENT EXERCISE III

Explain 4 ways in which the Atmosphere has effect on man.

4.0 SUMMARY AND CONCLUSION

In this unit, you have been exposed to simple definitions of the atmosphere. The characteristics of atmosphere have been explained. Remarkably, over 99% of the atmosphere lies within 30 kilometers of the earth surface. But most importance, the purposes the atmosphere serves to humanity have been brought to your known. The practical relevance or effect of the atmosphere to man cannot be overemphasized. Without it, there will be no oxygen for man to breathe. It is also where we live. It serves as the air routes.

5.0 TUTOR-MARKED ASSIGNMENT

Write a letter to your Course Tutor, starting 4 things you have gained by going through this unit on the Atmosphere.

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Bozimo, G., Gotep, M.G., Zulalchir, R., and Obanya O.A [ed] [2004].Current Trends in Social Studies Education. Jos: WAIS Printing Press.

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UNIT 3 THE HYDROSPHERIC PLACE

CONTENTS

1.0 INTRODUCTION

In the two previous units, you have learnt that, structurally, the earth is in layers, just like an onion. The layers, as you also have learnt, are also called zones. The first zone we have so far discussed is the Atmosphere. In this unit, we are taking up a close examination of the second zone of the earth called, the Hydrospheric place or the Hydrosphere.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- explain the meaning of the Hydrospheric place;
- state the characteristics of the Hydrospheric Place; and
- explain the importance of the Hydrospheric place.

2.1 HOW TO STUDY THIS UNIT

1. Recall that you are not being trained to be geographers. You are being trained to equip yourself with geography concepts, for your teaching in the Social Studies classroom.
2. Note that the concepts you are coming across in this unit are relevant and valuable in highlighting the core of Social Studies – man interaction with his environment.
3. Read over and over the contents, to master them.
4. Attempt the SELF ASSESSMENT EXERCISE and the TUTOR-MARKED ASSIGNMENTS in this unit.

2.2 WORD STUDY

Surface movement: this refers to water that flows on the earth's surface.

Water cycle: this is the cycle of processes by which water circulates between the earth's oceans, atmosphere and land involving precipitation as rain and snow, drainage in streams and rivers , and returns to the atmosphere by evaporation and transpiration, water and energy through the earth's system.

Soil water: this is the water held in pore spaces between soil particles

Ground water: this is water found beneath earth's surface, filling the porous spaces in soil, sediment, and rocks.

3.0 MAIN CONTENT

3.1 The Hydrosphere or Hydrospheric Place

Hydrosphere is the liquid component of the earth. It is often called 'water sphere' as it includes the earth's water found in streams, lakes, soil, groundwater, oceans, seas, ponds, rivers, and waters in the air. The hydrosphere interacts with and is influenced by all other spheres. The water in the hydrosphere is distributed among several different stores found in the atmosphere.

Edinyang, etal (2012) maintains that water is held in ocean, lakes, rivers, ponds and streams at the surface of the earth. In the air water is found in vapour, liquid and solid states. The hydrosphere covers about 70% of the surface of the earth and is the home for many plants and animals.

Man interacts with the hydrosphere for agricultural and domestic purpose. The hydrosphere also plays important roles in industries ,such as coding engines, production of steam for running of other engines as well as water for hydroelectricity as in Kainji Dam for electric power generation, water transportation in ships, submarines, petroleum oil in pipe lines located in water are essential for human development.

The hydrosphere, like the atmosphere, is always in motion. The motion of rivers and streams can be easily seen, while the motion of the water within lakes and ponds is less obvious. Some of the motion of the oceans and seas can be easily seen while the large scale motions that move water great distances such as between the tropics and poles or between continents are more difficult to see. These types of motions are in the form of currents that move the water in the tropics toward the poles, and colder waters from the polar regions toward the tropics. These currents exit on the surface of the ocean and at great depths in the ocean (up to about 4km).

SELF ASSESSMENT EXERCISE I

Explain in your own words the meaning of Hydrosphere.

3.2 Characteristics of Hydrosphere

The hydrosphere has the following characteristics,

i The hydrosphere is the liquid component of the earth

ii It covers 70% of the earth crust.

iii. It holds water in various forms-solid, ice and liquid.

iv. It plays an important role in industries and agriculture.

v. It is natural or manmade.

vi. It is mobile or dynamic.

vii. It has chemical substance

SELF ASESSMENT EXERCISE II

State 4 characteristics of the Hydrosphere

3.3 The Importance of the Hydrosphere to Man

The hydrosphere, according to Ajayi (2003) refers to the water masses which include rivers, seas and oceans. It is the liquid portion of the earth and it occupies about 70% of the total earth crust. The hydrosphere holds water in both solid and gaseous forms.

The Hydrosphere is of great importance to man in the following ways: (p 24)

1. it provides water for domestic uses e.g. washing, drinking, cooking etc.
2. it provides a medium of transportation.
3. it also provides water for industrial uses.
4. it provides food in form of fish, prawns, etc to man.
5. it provides employment e.g. fishermen.
6. it is a medium for sport e.g. swimming, diving, etc.
7. it can also be used to generate electricity e.g. hydro-electric power.
8. It is used in agriculture in form of rain or irrigation.
9. It also serves as tourist centres e.g. rivers and beaches.

SELF ASSESSMENT EXERCISE III

State 4 areas in which the Hydrosphere is important to man

4.0 SUMMARY AND CONCLUSION

The Hydrosphere or the Hydrospheric place occupies a bigger part of the earth surface. It is the liquid portion of the earth and covers about 70% of the earth surface. Of this, ocean water accounts for about 97% of the entire hydrosphere.

It is popularly said that water is life. That is, without water, life and living is practically impossible. The overriding importance of water to man and his survival can therefore not be overstated.

5.0 TUTOR-MARKED ASSIGNMENT

1. a. Name the main source of Hydrosphere

   b. List five importance of Hydrosphere to man.

6.0 REFERENCES

Bozimo, G., Gotep, M.G., Zulalchir, R., and Obanya O.A [ed] [2004].Current Trends in Social Studies Education. Jos: WAIS Printing Press.

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Wikipedia

UNIT 4 THE LITHOSPHERIC PLACE

CONTENTS

1.0 INTRODUCTION

You have just learnt in unit 3 about the second zone or layer of the earth, which is liquid in form and which covers nearly 70% of the surface of the planet earth. In this unit, it is the turn of that part of the surface which is made up of solid and rocky materials to be carefully examined. This layer or zone of the earth is called the Lithospheric place or the Lithosphere.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- say what is meant by the term Lithosphere or Lithospheric place;
- list the characteristics of the Lithospheric Place; and
- describe the importance of the Lithospheric place to man.

2.1 HOW TO STUDY THIS UNIT

1. Recall that you are not being trained to be geographers. You are being trained to equip yourself with geography concepts, for your teaching in the Social Studies classroom.
2. Note that the concepts you are coming across in this unit are relevant and valuable in highlighting the core of Social Studies – man interaction with his environment.
3. Read over and over the contents, to master them.
4. Attempt the SELF ASSESSMENT EXERCISE and the TUTOR-MARKED ASSIGNMENTS in this unit.

2.2 WORD STUDY

Fragment(ed): if something is fragments or is fragmented, it breaks into a lot of separate pieces or parts.

Crust: the thick or hardened outer surface of the earth.

Brittle: a brittle substance or object is hard and can easily break into pieces.

Collide: if people or things collide, they crash into each other.

Diverge: to start to go in different directions; to develop and become different after being the same.

Grind: to break something into very small pieces or powder by using a machine or by crushing it between two hard surfaces.

3.0 MAIN CONTENT

3.1 The Lithosphere or Lithospheric Place

The lithosphere is the solid, rocky layer covering the entire surface of the planet earth, composed of the crust and the hard uppermost mantle, and reacts to stresses as a brittle solid. The lithosphere ranges in thickness from 50 – 200 km A and is fragmented into tectonic plates with boundaries where plates collide, diverge or grind past each other. The lithosphere is composed of the oceanic and continental crusts, along with the attached hard, brittle rock of the uppermost mantle.

This is the region that is basically made up of soils and rocks which are products of weathering of the rocks. The constituents of soil include complex mixture of organic matter, inorganic matter, water and air. The organic contents of the soil are usually 5% of the soil and it is the major determinant of soil fertility. The inorganic matters include silicates of sodium (Na), Potassium (k), calcium (ca), Aluminum (Al), Iron (Fe) among others. Other constituents of the soil like humus, clay and minerals are also present and possess high calcium exchange capacity, and thus play vital roles in supplying essential trace metals to plants as nutrients.

The lithosphere has two main parts, the soil and sima. The soil has relative density of 2.7 and consists of granite rock. The sima on the other hand, is denser in weight with a relative density of 3.0, and comprises of basaltic rocks. Sial is rich in mineral constituents known as silica and alumina, while sima is rich in silica and magnesium.

SELF ASSESSMENT EXERCISE I
Explain the term Lithosphere

3.2 Characteristics of Lithosphere

i. It is the outermost layer or zone of the earth crust.
ii. It represents 30% of the earth surface
iii. It is made up of rocks and minerals
iv. It forms the land mass which is about 10-40km thick
v. The outermost layer of the land mass is made up of loose rock materials like gravel sand and soil.
vi. The soil components of the lithosphere produces source of dependence for plants and animals

SELF ASSESSMENT EXERCISE II
State 4 characteristics of the lithosphere

3.3 Importance of the Lithosphere

Like other parts of the earth, the lithosphere has the following benefits:

i. It forms the basis of all human settlements. The economic benefits of the constituents attract settlements.
ii. All mineral resources are derived from the lithosphere. This benefit is further exploited for the provision of other services.
iii. All farming activities according to Edingyang, etal (2012) are carried on the lithosphere. Thus providing source of food security and income generation
iv. The lithosphere aids transportation through road construction, railways

SELF ASSESSMENT EXERCISE III
Discuss 3 ways in which the lithosphere contributes to man's economic activities.

4.0 SUMMARY AND CONCLUSION

The Lithosphere, the rocky and crusty earth's surface also made of the soil, is of crucial important to man and his activities. It is the basis of an area of knowledge known as Geography. It is also a market place for Social Studies to draw useful materials to explain the issue of man at work in the environment. Can man build a solid structure today without the rock in its fragment and brittle forms? This is an area the Lithosphere is valuable to man.

The Lithosphere provides mineral resources that are used for the provision of basic necessities of life. It occupies a large part of the earth surface. The components of the lithosphere are used for human capital and resource development.

5.0 TUTOR-MARKED ASSIGNMENT

Please visit, http://en.wikipedia.org/wiki/moon and http://en.wikipedia.org/wiki/solar-system.html to provide additional information on the characteristics of the lithosphere.

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Kadiri, Y., Ololobou, C.O., Ahmed, T.S., and Zuru, A.G.A. [2011].Fundamentals of Social Studies Education.Vol (1). Kano: Jaleyemi Graphics and General Enterprises.

UNIT 5 THE PLACE OF INDIVIDUAL ON THE EARTH

CONTENTS

1.0 INTRODUCTION

We now come to a consideration of the fourth layer or zone of the earth planet, the Biosphere. In a unanimous agreement from the Concise Oxford Dictionary (2008:136) the Colin's English Dictionary (2005:158) biosphere is defined as 'the part of the earth's surface and atmosphere inhabited by living things/living organisms.' Macmillan English Dictionary for Advanced Learners (2002:135) does not differ much in emphasis, as it sees biosphere as "the parts of the earth's surface and atmosphere where plant and animal life can live.' Biosphere is, thus 'the place of individuals on earth.' In this unit, we would analyze, for your understanding, the concept of the Biosphere, its characteristics and its importance to man, just as we have treated the three layers of the earth already covered.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- explain the concept of Biosphere;
- discuss the characteristics of Biosphere; and
- explain the importance of Biosphere to man.

2.1 HOW TO STUDY THIS UNIT

1. carefully read this unit noting and mastering the major points.
2. Attempt the SELF ASSESSMENT EXERCISE and the TUTOR-MARKED ASSIGNMENTS in this unit.

2.2 WORD STUDY

Puerto Rico: an autonomous commonwealth (in association with the US) occupying the smallest and easternmost of the Greater Antilles in the Caribbean; one of the most

densely populated areas in the world, ceded by Spain to the US in 1899. Capital: San Juan, former name (until 1932): Porto Rico; Abbreviation: PR.

Eco-system: denotes ecology or ecological.

Eco-: a prefix relating to the environment.

Ecological: relating to the environment and the way plants, animals and humans live together and affect each other

Protists (Protistan):a member of the Protista, kingdom or large grouping of typically singled-celled organisms including the protozoans, slime-molds and single algae and fungi.

Protozoans: a single-celled microscopic animal of a group of phylia of the kingdom of Protista which includes amoeba, flagellates, ciliates and sporozoans.

Terrestrial: on or relating to the earth or dry land eg an animal or plant living on or in the ground.

3.0 MAIN COTENT

3.1 Biosphere

Biosphere, from Greek 'bios' means life, and 'sphaira', sphere, is the layer of the planet earth where life exists. The layer ranges from height of up to 10 km above sea level used by some birds in flight to depths of the ocean such as the Puerto Rico trench, at more than 8 km deep. There are extremes. However, in general, the layer of the earth containing life is thin. The upper atmosphere has little oxygen and very low temperatures while ocean depths greater than 1,000 metres are dark and cold. In fact, it has been said that the biosphere is like the peel in relation to the size of an apple.

The development of the term is attributed to the English geologists, Edward Suess (1831 – 1914) and the Russian physicist Vladimir I Vernadsky (1863 – 1945). The biosphere is one of the 4 layers that surround the earth along with the lithosphere (rock), hydrosphere (water) and atmosphere (air) and it is the sum of all the eco system.

The biosphere is unique. So far, there has been no existence of life elsewhere in the universe. Life on earth depends on the sun. Energy, provided as sunlight, is captured by plants, some bacteria and protists, in the marvelous phenomenon of photosynthesis. The captured energy transforms carbon dioxide into organic compounds such as sugars and produce oxygen. The vast majority of species of animals, fungi, parasitic plants and man, bacteria depend directly or indirectly on photosynthesis (www.biodiversidad.gob.mx/vingles/p).

Also, (the Business Dictionary) described Biosphere as that part of the earth's surface and atmosphere that contains the entire terrestrial eco system, and extends from ocean depths to about 6 km (3.7 miles) above sea level. Not precisely demarcable, it contains all living organisms and what support them: soil, sub-surface water, bodies of water, air, and includes hydrosphere and lithosphere, also called eco sphere.

SELF ASSESSMENT EXERCISE I

Summarise in your own words what biosphere means.

3.2 Characteristics of Biosphere

i. The biosphere is the zone of the earth occupied by living organism.
ii. It is a layer of life which exists on earth surface and the lithosphere.
iii. It has a maximum thickness of only a few kilometers.
iv. It is a narrow zone where complex biological and chemical activities occur.
v. It includes organisms like plants, animals and micro-organisms.

SELF ASSESSMENT EXERCISE II

State 4 major features of biosphere

3.3 Importance of the Biosphere to Man

i. Plants in the biosphere provide food for man.
ii. It also provides a source of energy like firewood for man.
iii. Plants also provide clothing materials like cotton and wool for man.
iv. It provides shelter in form of timber for man.
v. It provides raw materials like timber, hide and skin, cotton for industries.
vi. Activities within the biosphere provide employment for man.
vii. It aids the balancing and purification of atmospheric gases e.g. carbondioxide during respiration and oxygen, during photosynthesis.

4.0 SUMMARY AND CONCLUSION

In this unit, you have added another dimension to your knowledge on the planet earth in this examination of its fourth layer – the biosphere. Biosphere is distinct in its own importance in that it is the place on earth occupied by living organisms, including Man and plants. Biosphere epitomises the place of individuals on the earth in that its plants provide food for man; it provides shelter in the form of timber for man. Activities within the biosphere provide employment for man.

5.0 TUTOR-MARKED ASSISNMENT

Explain the value of biosphere to man

6.0 REFERENCES

Ajayi, P.O.S. (2003). Comprehensive Geography for Senior Secondary Schools.Surulere: A Johnson Publishers Ltd.

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UNIT 6 THE EFFECTS OF THE ATMOSPHERE ON MAN

CONTENTS

1.0 INTRODUCTION

You would recall that in unit 2, you were introduced to a study of the atmosphere as the first layer of the outer zone of the planet earth. That unit discussed the concept of the atmosphere, its characteristics and its importance to man. Perhaps, the draftmen of curriculum you are presently going through believe that the atmosphere is such a critical aspect of the earth that they would want the topic re-visited but from a slightly different angle. That is what we would be taking you through in this unit. Your focus is being taking away from the importance of the atmosphere to the effect of the atmosphere on man. We would take a careful note of the difference between 'importance' and 'effect' in approaching the discussion.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- reflect on the meaning of the atmosphere;
- identify the effect of the atmosphere on main and his life; and
- evaluate the effect of the atmosphere on the economic and related activities of man.

2.1 ACTIVITY I

1. Go back and read over twice unit 2.
2. Pay particular attention to our explanation of the characteristics of the atmosphere.
3. Note down and master the key important contributions of the atmosphere and try to relate its effect on man.
4. Attempt the SELF ASSESSMENT EXERCISE and the TUTOR-MARKED ASSIGNMENTS in this unit.

2.1.1 How to Study his Unit

1. Carefully read this unit , noting and mastering the major points.

2.2 WORD STUDY

Effect: a change which is a result or consequence of an action or other cause.

Importance (important): of great significance or value.

Convective (convection): transference of mass or heat within a fluid caused by the tendency of warmer and less dense material to rise.

Gas: the air-like fluid substance which expands freely to fill any space available irrespective of its quality.

Climate: the general weather conditions prevailing in an area over a long period.

Weather: the state of the atmosphere at a place and time as regards temperature, wind, rain etc.

Physiological (physiology): the branch of biology concerned with the normal functions of living organisms and their parts.

3.0 MAIN CONTENT

3.1 The Atmosphere

Authors agreed that the atmosphere is 'the air around the earth'; 'the envelop of gases surrounding the earth'; and 'the gaseous envelop surrounding the earth.' These gases are in layers and they differ from one another. The layer where the weather occurs and has effect on man is called troposphere and is some 16 kilometres above the sea level. There are other layers and are determined by weather. Temperature increases or decreases in these layers with altitude.

Weather and climate play significant roles in many physiological processes, from conception and growth, to health and disease. Humans, in turn, can affect weather and climate through the alteration of the earth's surface and the introduction of pollutant and chemicals, such as carbon dioxide into the atmosphere. In other words, the day-day variations in a given area constitute weather whereas climate is the long term synthesis of such variations. Weather is measure by thermometers, rain gauge, barometer and other instruments. The study of climate on the other hand relies on statistics which are handled by computers.

The troposphere is the atmospheric layer closest to the planet and contains the largest percentage (around 80%) of the mass of the total atmosphere. Temperature and water

vapour content in the troposphere decrease rapidly with altitude. Water vapour plays a major role in regulating air temperature because it absorbs solar energy and thermal radiation from the planet's surface. The troposphere contains 99 % of the water vapor in the atmosphere.

All *weather* phenomena occur within the troposphere, although turbulence may extend into the lower portion of the stratosphere. Troposphere means "region of mixing" and is so named because of vigorous convective air currents within the layer.

SELF ASSESSMENT EXERCISE I

Differentiate between weather and climate

3.2 The Effect of the Atmosphere on Man

Effect has been described as 'a change which is a result or consequence of an action or other cause'; 'a change that is produced in one person or thing by another.' It is also defined as 'power to influence or produce a result.' The questions now arise: what change or changes has the atmosphere brought or produced in men? In what ways has the atmosphere influenced or produced results on men? What power does the atmosphere have to influence or produce results in men and their activities?

It is in the atmosphere that weather is house, where water vapour and rain water come from. This is where air and water comes to the earth's surface and produces erosion. Through erosion, the earth changes through the years and this has an impact on men. Erosion leads men to relocate to new areas to live. But erosion carries deposits of silt to other areas, which are fertile and rich soil for farming.

Oxygen, an important constituent of the atmosphere helps men to breathe. Respiration is also an important process for both plants and animals. Through respiration, men breathe and are able to live. The same goes for plants and animals. The atmosphere therefore provides the opportunity for men to live, cultivate plants and rear animals for meat, to produce milk and for general upkeep.

We are living in a world now of air transport and telecommunications. The atmosphere provides a medium of communication. It carries the air waves for telecommunication, which now make men more effective in communicating with one another, both near and far. Through it, air crafts plot their routes which make trips faster and more comfortable for men.

SELF ASSESSMENT EXERCISE II

Explain 2 areas in which the atmosphere has effect on men.

Effects of the Atmosphere on Men

a) Agricultural activities

The atmosphere in form of climate dictates the activities of man. For instance, rainfall, through precipitation, is very important in farming. This is because it provides water for plants to grow well. When there is no rainfall man cannot plant crops under irrigation.In another way, when the farmer harvests his crops, he depends on sunshine to ripe and dry some of the plants, for example, corn, sliced yams and some vegetables for the purpose of preservation.

b) Decision making processes.

The atmosphere necessitates the people to move from one place to another. This situation calls for decision making regarding where and how to go. For instance, the Fulani cattle rearers, during the rainy season, remains in the northern part of Nigeria because of availability of pastures on which cattle can graze and water to drink. In dry season, they move to better pastures in the southern part, where rain would be falling and grass available for pasture/cattle. This movement from north to south is a product of decision making. This decision making is a product of the effect of atmosphere on man. This decision-making process could also be on the choice of when a road could be constructed, either in the dry or rainy season.

SELF ASSESSMENT EXERCISE III

State 2 positive and negative effects of the atmosphere on man

4.0 SUMMARY AND CONCLUSION

The atmosphere is the seat of air or gases. These gases are of in estimate value in the impact they make on men. Their positive and negative effects have been explained in this module – from the point of the oxygen that is supplies, to the opportunity it provides for aviation and telecommunication facilities for men. Erosion is an outcome of water vapour or heavy rain showers. Floods have caused damaging effects of man's houses, farms, and lives. Villages have been forced to leave their ancestral homes and relocate to areas they would never have loved to go psychologically and economically. There is the very good side of the impact of the atmosphere on men, but there are a few bad others.

5.0 TUTOR-MARKED ASSIGNMENT

Organise a debate in your locality with the help of a prominent educationist with the topic: "The atmosphere is more harmful than helpful to man." Compile a report for your course tutor.

6.0 REFERENCES

Bozimo, G., Gotep, M.G., Zulalchir, R., and Obanya O.A [ed] [2004].Current Trends in Social Studies Education. Jos: WAIS Printing Press.

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Wikipedia

UNIT 7 THE RELATIONSHIP BETWEEN MAN AND THE COMPONENT OF THE EARTH

CONTENTS

1.0 INTRODUCTION

In the previous unit, you were introduced to the idea of human adaptation to the dictates of the environment. To help your understanding and appreciation, examples were cited. In this unit you will learn more about the relationship between man and components of the environment.

2.0 OBJECTIVES

By the end of this unit, you should be able to:-

- identify and discuss factors that promote man's relationship with the components of the environment; and
- describe at least two examples of man's relationship with the components of the environment.

3.0 MAIN CONTENT

3.1 Factors that Promote Man's Relationship with His Environment

a) The Physical Environment

Through time, man has had his home in caves, on branches of trees, in hurts, in houses built from different kinds of local materials which may have been imported from other cultures. While it is true that the stage of technological development reached a point of different styles of homes man has had through time, the fact remains that many

present day homes still strongly suggest adaptation to the realities of the physical environment.

Many typical rural Gbagyi houses may be found in the triangle formed by the geographical locations of Kaduna, Minna, and Kafanchan towns of Northern Nigeria. The rainfall in these places is much less than that experienced in the southern part of the country. The vegetation is savannah. In building their houses, the people make use of materials that are readily available in the locality, such as, sticks, grass, grass-mats and earth materials.

Around many fishing settlements in the Niger Delta, land is low and easily flooded. In building houses in such fishing settlements, the people raise, by means of stilts, the floor level above all possible flood levels, keeping themselves out of reach of floods. The materials used are also locally provided. These include thatches, sticks, ropes and large raffia palm branches.

SELF ASSESSMENT EXERCISE I

Describe the rural settlements of the Gbagyis and Niger Deltans.

b) The Social Environment

Man's interaction or relationship with his social environment involves the process of communication in the society. The various social groups that constitute a given community have their languages, cultures and family life. There are also interpersonal relationships that produce certain patterns of behaviours.

The development of skills in man's interaction in his social environment is very important. This process begins from the home through the process of socialization. The child can express his feelings, interests, demands, and objectives by the use of language symbols and skills. It is with the language skills that the individual learns aspects of the culture of his society. The family and the agencies help him.

The acquisition of skills in social interaction continues at the secondary level of socialization in the school. The school as an institution of learning has become an extremely important agent of socialization over the world. The school provides the transitional experience from the values and behaviours of traditional life into these required in the modern society. The school provides opportunities for children to make social contacts with other people from different backgrounds through various activities like, sports, field trips, excursion, social and academic clubs, and other classroom activities. These activities have helped to offer unity and social integration.

SELF ASSESSMENT EXERCISE II

How does man engage in social relationship with his environment?

c) The Economic Environment

Man's relationship with his economic environment begins from the process of production of goods and services. In the society, there are human and natural resources that need to be explored and exploited for the survival, development and progress of man. In this situation, man becomes the dynamic factor of production. His energies, skills, knowledge and ingenuity are applied to the exploitation of raw materials and the production of final goods and services.

In addition, man is also involved in the demand and supply of goods and services that he has produced. He does this through various channels of exchange of goods and services like markets, financial institutions, and entrepreneurship education. These economic activities that man engages in are aimed at helping him his basic needs of clothing, food and shelter, irrespective of his socio-cultural status.

SELF ASSESSMENT EXERCISE III

Describe the relationship between man and his economic environment.

d) Man and his Political Environment

Human beings are social animals and cannot live in isolation. Fadeiye (2005) has observed that the history of man has clearly shown that man cannot live a full life without sharing contact with his fellow men. The need for man to create a political environment for his interaction and development arose from the fact that when man decided to live as a social group, the necessity to choose a leader, who will be capable of leading them in peace and war times, arose. The leader was expected to settle conflicts amongst members of the group or society.

In some social groups, the position of a leader became hereditary, while in others it became elective. As a result, the need to develop rules and laws that guide the selection and election of the leaders became very important. The traditional authority is shared by traditional rulers, while legal authority is guided by the constitution. This is because authority and power is exercised within a network of clearly defined hierarchical roles and delegation of power and authority. Government is structured in tiers to ease management and to promote social stability. In Nigeria, for instance, the structure of government includes federal, state, local, district, village and clan levels. Each level has prescribed functions or responsibilities that facilitate political interaction.

SELF ASSESSMENT EXERCISE IV

Describe the relationship between man and his political environment.

4.0 SUMMARY AND CONCLUSION

In this unit you identified and discussed the components of the environment and how man interacts or relates to them. Some illustrations of two locations (north and south) were exemplified for clarity. The unit revealed that man's relationship with his environments requires some knowledge, skills, language and other institutions, if development and progress is to be achieved.

5.0 TUTOR-MARKED ASSIGNMENT

Refer to your community and describe how members relate with their social, economic, physical and political environments.

6.0 REFERENCES

Fadeiye, J.O (2005). A Social Studies Textbook for Colleges and Universities (Part One). Ibadan: Akin Johnson Press and Publishers.

Onyesom L.O.N and Ukadike, O.J. (2011).Essentials of Economic Activities for Tertiary Institutions.Agbor: SUNTEX PRODUCTIONS.

UNIT 8 AN ANALYSIS OF THE ROLE OF MAN'S ACTIVITIES ON EARTH

CONTENTS

1.0 INTRODUCTION

The natural endowments of earth environment get extinct and make life uncomfortable, if over exploited. The activities of man on earth are enormous. The earth's environment includes things that are on and that are beneath the land surface. These include; forests, deserts, valleys, rivers, highlands, plains, rocks, seas, oceans, lakes and the sun. We should also not forget climatic conditions and the social interactions of man with and institutions. These will provide a context within which we could carry out an analysis of the role of man's activities on earth in this unit.

2.0 OBJECTIVES

By the end of this unit, you should be able to;

- identify different areas of the earth;.
- state the activities of man in those different areas of the earth; and
- analyze the role of man's activities on earth.

2.1 ACIVITY I

As you read through this unit, you should.

1. Cast your mind on different activities performed by people in your community.
2. Identify difficult words and confirm their meanings.
3. Attempt the SELF ASSESSMENT EXERCISE and the TUTOR-MARKED ASSIGNMENTS in this unit.

2.2 How to Study this Unit

1. Carefully study this unit , noting and mastering the major points.

2. Attempt the self-assessment exercise and the tutor-marked assignments in this unit.

2.2 WORD STUDY

Natural Endowment: natural resources provided by nature based on the type of environment.

Exploration: the search for those things that man requires for survival.

Exploitation: the process of extracting resources from the environment using a variety of tools and techniques i.e. the action of treating someone unfairly inorder to benefit from resources.

Institutions: structures of interactions and relationships of people that are formal or informal and directed towards achieving personal and group interest.

3.0 MAIN CONTENT

3.1 Components of the Earth

The components of the earth constitute man's surrounding or environments, fellow human beings, animals and physical features. The interaction of man in these social and physical environments produces certain results that need to be studied and understood.

a) Social component

The social interaction of man on earth involves activities that include family socialization of its members. The parents and siblings are the teachers of the new born child. The child learns to walk, talk. He or she acquires knowledge, attitudes, values, and skills, through the guidance of members of the immediate extended family system, which is called socialization or acculturation. The members of a social group also have recreational activities like naming, birthday, burial ceremonies, ritual festivals, weddings, sports, and many others. These aspects of man's activities are important for the physical, emotional, and mental development of the members of the community.

Man also performs the function of ascribing several statuses to members of the community based on age, sex, and economic possession. The implication of this aspect of man's activities on earth is that it produces a class system that tends to rank members of the community. This situation has led to matters arising from the manner national and community wealth are distributed across the strata of the society.

In the area of population education, man's activities have led to deliberate policies by the Nigerian government to check population growth. For instance, family planning programmes have been developed and implemented to control population growth.

The activities of man on earth have further led to man coming together to live in groups. These social groups, whether they live in nuclear family, extended family or clan, have given rise to certain factors that play some roles in man's survival, development, laws, customs morality moves and folkways systems of production and distribution of goods and services.

SELF ASSESSMENT EXERCISE I

Describe the social components of man's activities on earth.

b) Physical component

The physical component of the earth comprises the earth materials (minerals, rocks and soils), relief features, water bodies the atmosphere (weather and climate), and vegetation. In the area of earth minerals, man's activities helped him to discover mica and silica which are used to manufacture electronics. Quartz sand is used in glass-making for building purposes. Clay, slates, sand, stones are used in brick making for building purposes. Man's interaction with the soil, which is inorganic, has organic matter or humus from decaying plants and animals, water, air and bacteria. This component of the physical environment, when it comes under man's activities, provides fibres for textiles, timber for housing and agriculture products for subsistence and exchange.

The mountains are sources of hard earth materials which are needed in the building industries, security for settlements, and causing rainfall. The plains are good for human settlements, good highways and railway construction.
The ridges, valleys and river channels provide sources of water for domestic, industrial and human consumption. The river channels, in particular, are dammed to hold back water for irrigation, hydroelectricity generation and fishing.

The weather and climate which are physical conditions of the atmosphere at different places produce either high or low or moderate temperature. These aspects of the physical components of the atmosphere help to sustain the hydrological circle which is important to man, considering his activities such as fishing and transportation; they also help to sustain plant lives and the lives of the lower animals on which man depends on for survival.

SELF ASSESSMENT EXERCISE II

Explain 3 activities man carries out within the earth physical component setting.

3.2 The Relationship between Man and Components of the Earth

The earth's components are many, but the atmosphere, hydrosphere, lithosphere and biosphere cannot be pushed aside among its most prominent ones. The relationship between these component parts is very interesting. Each component has unique qualities and value it represents in determining the kind of relationship man has with it. Let us isolate each and explain.

The atmosphere is the earth's place of air or gases. Man does not live there. But the air of the atmosphere makes living possible for man and the plants and animals man depends on for eating and exchange. The atmosphere conditions man's ability to travel through the sky with aircrafts. Man would not have been able to farm without rain water that falls from the atmosphere through the alteration in temperature and vapour, kilometers up from the ground.

The hydrosphere's other name is the place of water. This component constitutes more than 70% of the earth surface. It is the home of fish and other aquatic living organisms. Fish is for eating and it is nutritious. The oceans help man to travel by ship. Oceans shores are home to oil, a commodity that fetches Nigeria its wealth. Rivers provide avenues for transport for men. They can be dammed for irrigation and reservoirs for men to drink and water their agricultural plants.

Lithosphere is about the rocky crusty part of the earth's surface. Embedded in them are rich minerals deposits which the geologists among men would live to work for a living. When the rocks brittle, they ultimately form the soil or ground on which houses are built, from which man's house walls are formed.

Last but not the least is the biosphere occupied by living organisms including man himself. Man relates with the food it provides from the plants. It is the biosphere that provides opportunity for the variety of employments for man.

Man's relationship with the earth's components is symbolic; those components make life and living worth a million for man. But man's activities and reliance on the existence of the elements of the earth are also important. Otherwise, those elements would find no use and would be redundant.

SELF ASSESSMENT EXERCISE III

Describe the role of man's activities on the earth's components

4.0 SUMMARY AND CONCLUSION

The earth's components would not have been of any use but for man's making use of them. Man's existence is dependent on air, water, the minerals, plants and animals which are the gifts of the earth's four main components to man.

5.0 TUTOR-MARKED ASSIGNMENT

Write a letter to your course-tutor, highlighting the gifts the earth's components have been to man.

6.0 REFERENCES

Famwang, W.V. Ololobou, P.S, and Okam, C.C. (1999).Social Studies for Service. Jos: LECAPS Publishers

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UNIT 9 MAN'S IMPACT ON THE ENVIRONMENT

CONTENTS

1.0 INTRODUCTION

The human environment has always contained things that were cherished and even worshipped .Things such as trees, rocks, water, sun, moon, and many others were protected for both economic and religious value. In recent times, modern societies have modified the environment in the process of trying to satisfy wants or vital instinctive urges necessary for survival. This unit is to equip you with an understanding of man's impact on the environment.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- understand the concept of Environment;
- state the components of the Environment; and
- explain the impact of man on Nigeria's Environment.

2.1 HOW TO STUDY THIS UNITY

1. Read the unit carefully and understand man's impact on the environment
2. Check the dictionary for difficult words that have not been addressed in this unit.
3. Attempt the SELF ASSESSMENT EXERCISE and the TUTOR-MARKED ASSIGNMENTS in this unit.

3.0 MAIN CONTENT

3.1 The Concept of Environment

The concept of environment, as used in this unit, refers to the socio-physical extent of land referred to as Nigeria. In other words, it refers to the land size, national and

physical boundaries. This involves both things that are on and beneath the land surface that are visible and invisible. They include forests, deserts, valleys, rivers, highlands, lowlands, seas, climate, weather, air, wind, sun, day and night. It includes also man's experience, social interactions with man and institutions.

The Nigerian environment, according to Bozimo, etal [2004] is very much endowed with variety of natural resources, both human and materials. Nigeria has a population of over 150 million people [2006 census figures].The materials resources comprises of minerals, cash crops like rubber.

3.1.1 The Social Component of the Environment

The social interaction of man on earth involves activities that include family socialization of its members, etc. The parents and siblings are the teachers of the new born child. The child learns to walk, talk, and acquire knowledge, attitudes, values and skills through the guidance of members of the immediate and extended family system.

The members of a social group also have recreation activities like naming, birthday, burial ceremonies, ritual festivals, weddings, sports, and many others. These aspects of man's activities are important for the physical, emotional and mental development of the members of the community.

Man also performs the function of ascribing several statuses to members of the community based on age, sex, and economic possession. The implication of this aspect of man's activities on earth is that it produces a class system that tends to rank members of the community. This situation has led to matters arising from the manner national and community wealth are distributed across the strata of the society.

In the area of population education, man's activities have led to deliberate policies by the Nigerian government to check population growth. For instance, family planning programmes have been developed and implemented to control population growth.

The activities of man on earth have further led to man coming together to live in groups. These social groups, weather they live in nuclear family, extended family or clan, have given rise to certain factors that play some roles in man's survival, development and progress. These factors include laws, customs, morality, mores and folkways systems of production and distribution of goods and services.

SELF ASSESSMENT EXERCISE I

Describe the social component of man's activities on earth's environment.

3.1.2 The Physical Component of Earth's Environment

The physical component of the earth comprises the earth materials [minerals, rocks, and soil]; relief features; water bodies. In the area of earth minerals, man's activities help him to derive mica and silica which are used to manufacture electronics. Quarts

sand is used in glass making for building purposes. Clay slates and sand-stove are used in brick-making for building purposes.

Man's interaction with the soil, which is inorganic has organic matter or humus from decaying plants and animals, water, air and bacteria. This component of the physical environment, when it comes under man's activities, provides fibers for textiles, timber for housing, and agricultural products for subsistence and exchange.

The mountains are sources of hard earth materials which are needed in the building industries and security for settlements. The plains are good for human settlements, good highways and railway construction. The ridges, valleys and river channels provide sources of water for domestic, industrial and human consumption. The river channels, in particular, are dammed to hold back water for irrigation, hydroelectricity generation and fishing.

SELF ASSESSMENT EXERCISE II
Describe the activities of man in the environment.

3.2 Impact of Man on the Nigerian Environment

In Nigerian man has impacted seriously on the environment through population pressure, socio-economic and technological activities. These according to Bain in Bozimo, etal [2004] have degraded the environment which is now characterized by the following:

i.**Pollution**:There are different forms of pollution that include, air, water, land and noise, resulting from domestic, industrial and oil pollutions. There are indiscriminate dumping of refuse and other human wastes, at refuse dumps and major roads and streams. In addition, man has been involved in oil spillage which always has unpleasant consequences on the inhabitants of the area especially on their major sources of livelihood such as plants and animals.

ii. **Deforestation and Desertification:** These are situations of gradual loss of forests due to creation of new settlements and other acts to support man. These activities include falling of trees, bush burning a rate that nature could not replace. On the other hand, desertification, the gradual removal of the cover of the land due to grazing, bush-burning, affect agricultural land especially in the Northern part of Nigeria.

iii.**Flooding and Land Erosion**: In most Nigerian cities and villages, flood and land erosion cause a lot of damage to the land and settlements.

SELF ASSESSMENT EXERCISE III
What are the major impacts of man's activities on the Nigerian environment?

4.0 SUMMARY AND CONCLUSION

This unit has identified two major components of the earth, namely the social and the physical components. The activities of man on the social and physical environment were analyzed. The analysis of the role of man's activities on earth and how he should conserve them through prudent environment management was proposed.

5.0 TUTOR-MARKED ASSIGNMENT

Describe the nature of your community environment and list some of the environment problems

6.0 REFERENCES

Famwang, W.V; Ololabou, Y.P.S; and Okam, C.C [1999].Social Studies to Service. Jos: LECAPS Publishers

Bozimo, G; Gotep, M.G; Zwalchir, R; and Obanya, O.A [Eds] [2004].Current Trends in Social Studies Education. Jos: WAIS Printing Press

UNIT 10 CONSOLIDATION

CONTENTS

1.0 INTRODUCTION

This unit ties together our examinations of the contents of units 1 – 9 with a view to refreshing your thoughts and also consolidates some aspects in the units. It would stress the critical importance of the earth and its components to human existence highlight the interaction within and between the earth's four zones and the importance of the atmosphere.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- describe in your own words the planet earth;
- explain its features; and
- irelate each of the components/zones to one another.

2.1 HOW TO STUDY THIS UNIT

1. Cast your mind back to the advice or guidance you received on the use of geography concepts to assist you in the Social Studies classroom.
2. Read quickly through units 1 – 9 to refresh your mind and recall a few contents you may have forgotten. This will make this unit easy for you to understand.
3. Tackle satisfactorily the SELF ASSESSMENT EXERCISE and the TUTOR-MARKED ASSIGNMENTS in this unit. They would help you find out your areas of difficulty and those of strength.

3.0 MAIN CONTENT

3.1 The Earth

The earth is the planet in which we live. It is sometimes called the planet Earth. It is the land on which human beings live. It consists of inhabitants. It is the only planet on which life exists. It is the third planet of the solar system in order of distance from the Sun. The earth is the 5th largest planet in the solar system. The earth is also used to

describe the land, the ground which consists of disintegrated rock particles, soil, moulds and hills. It is one of the 4 elements in ancient and medieval philosophy and in astrology.

SELF ASSESSMENT EXERCISE I

Summarise in your own words what you think the earth is.

3.1.1 Characteristics of the Earth

The fundamental characteristic of the earth is spherical shape. There are many ways to prove or show that the earth is spherical. These include:

1) Circumnavigation of the Earth: It is possible to go round the earth by air, land and sea and return to the starting point as carried out by Ferdinard Magellan and his crew between 1519 and 1522. If the earth is flat, one would come in contact with an abrupt edge and fall off.

2) Sunrise and Sunset: As the earth rotates from west to east, places in the east experience the sun earlier (sunrise) than places in the west. Also places in the west see the sun later (sun-set) than places in the east. The whole earth would experience sunrise and sunset at the same time if the earth is flat.

3) The Circular Horizon: When one views a distant horizon from any point of the earth, the shape is always circular. And as one climbs higher, the circular horizon widens. This type of feature is seen only on a spherical body.

4) Planetary Bodies: When the sun, moon, starts, and other planetary bodies are viewed from an angle, they are all circular in outline. So, the earth cannot be an exception.

5) The Lunar Eclipse: During lunar eclipse, the earth casts a circular shadow on the moon. Only a sphere, like the earth can cast such a circular shadow.

6) Aerial Photographs: Pictures of the earth taken from high altitudes by rockets clearly show the curve edge of the earth. This is the most recent proof of the sphericity of the earth.

SELF ASSESSMENT EXERCISE II

Write down 3 evidences or proofs of the earth's spherical shape.

3.2 Relationship between Man and Components of the Earth

The earth's components are many, but the atmosphere, hydrosphere, lithosphere and biosphere cannot be pushed aside among its most prominent ones. The relationship between these component parts is very interesting. Each component has unique

qualities and value it represents in determining the kind of relationship man has with it. Let us isolate each and explain.

The atmosphere is the earth's place of air or gases. Man does not live there. But the air of the atmosphere makes living possible for man and the plants and animals man depends on for eating and exchange. The atmosphere conditions man's ability to travel through the sky with aircrafts. Man would not have been able to farm or have rain water that falls from the atmosphere through the alteration in temperature and vapour, kilometers up from the ground.

The hydrosphere's other name is the place of water. This component constitutes more than 70% of the earth surface. It is the home of fish and other aquatic living organisms. Fish is for eating and it is nutritious. The oceans help man to travel by ship. Oceans shores are home to oil, a commodity that fetches Nigeria its wealth. Rivers provide avenues for transport for men. They can be dammed for irrigation and reservoirs for men to drink and water their agricultural plants.

Lithosphere is about the rocky crusty part of the earth's surface. Embedded in them are rich minerals deposits which the geologists among men would live to work for a living. When the rocks brittle, they ultimately form the soil or ground on which houses are built, from which man's house walls are formed.

Last but not the least is the biosphere occupied by living organisms including man himself. Man relates with the food it provides from the plants. It is the biosphere that provides opportunity for the variety of employments for man.

Man's relationship with the earth's components is symbolic; those components make life and living worth a million for man. But man's activities and reliance on the existence of the elements of the earth are also important. Otherwise, those elements would find no use and would be redundant.

SELF ASSESSMENT EXERCISE III

Describe the role of man's activities on the earth's components

4.0 SUMMARY AND CONCLUSION

This Module has been about the Structure and Characteristics of Man's Place, that is, the planet earth. Its general features have been covered, as well as those of its 4 main components. The characteristics and importance of each area were also analysed. In all of these, how these components add value to man's existence by the kind of activities he undertakes were also highlighted. The module reminds us of the value of geography as a branch of the Social Sciences to the teaching of Social Studies with an emphasis on the interrelationship between man and his environment.

6.0 REFERENCES

All the references in unit 1 to 9.