

Full Length Research Paper

Improvising Teaching and Learning Aids in Classes of Geography in Ogun State (Nigeria) Senior Secondary School (SSS)

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Abstract

Geography is a significant school subject but there are pull and push factors militating against effective teaching and learning about it at the Senior Secondary School (SSS) level of education in Ogun State (Nigeria). One of these is the dearth of resources. The objective of this piece is to look at the SSS Geography syllabus and suggest materials for improvisation of teaching aids. Geography of Ogun state was reviewed. WAEC, NECO and UTME syllabi were perused and specific topics of teaching and learning identified. The WAEC syllabus was tabulated into six parts and notes produced on each. Using the notes, materials from the local environment were suggested and procedures for their uses described. There is no aspect that absolutely lack materials for effective teaching and learning. Extensive use of chalk boards, chalk of various colours, pencils, Atlas maps and sketches of maps were suggested. Field works, Field Visits, Excursions and others were suggested as complementary to studying and fiddling with materials. The work also suggests use of School Van, ICT, Home Works, Projects, Assignments, Geography Laboratory and Meteorological Garden as imperative. The first two years may be traumatic and cumbersome but subsequent years will be building on the previous experiences and materials.

Keywords: Teaching aids, learning aids, chalk board, atlas map, laboratory.

BACKGROUND TO THE STUDY

The significance of Geography as a school subject cannot be over emphasized (Woodridge and East 1951, Aderogba, 1990, 2009 and 2011; and Boehim, 1996). It combines with many school subjects - Arts, Social Sciences, Pure Sciences, Mathematical Sciences, Languages and Technical Education to make a child qualify for tertiary education in Nigeria, and outside the country too. Similarly, it has led to making of professionals in various fields of human endeavour – Planning, Administration, Academics, Cartographic, hydrologic, climate, environmental and others - just to mention but a few. Boehim (1996) produced in tabular

forms, outlines of major areas of study in Geography and the associated professions. Abegunle, (1988) wrote on “The Promotion of career opportunities through the Senior Secondary School Geography”. Similarly, Sada (1976) and Areola (1978) wrote on the roles of Geography and geographers in nation building. But there are complaints about the large scope and abstract nature of the subject. The complaints are widespread among students; and teachers alike. That the subject is abstract is accentuated by the assumption that it is difficult to teach and learn about, and more importantly there are no readily available teaching aids for effective teaching and

learning about the subject, (Eya 1983 and Aderogba, 2009). These probably explain the push and pull factors (Akanke 1982, Adetuberu 1983 and Ajaegbu 1983); and skepticisms of Senior Secondary School (SSS) students to register for the subject in their West African Examination Council (WAEC), National Examination Council (NECO) and University Matriculation Examination (UME) for admission into tertiary institutions, (Aderogba, 2011). That is, talkless of reading Geography as a major course of study at the tertiary level of education, (Aderogba 2005, 2012 and Aderogba and Ogunowo 2010). In spurious style, Aderogba (1990, 2005 and 2012) particularly repeatedly lament dearth of alien materials for effective teaching and learning about the subject in Nigerian Schools; and quick to suggest the use of local materials in place. This is becoming more relevant with declining availability of those sophisticated material; and Nigerian Government policies and programs on local content.

However, the objective of the study is to examine each aspect of the syllabuses of WAEC, NECO and UTME and identify materials for improvisation of aides (resource) for teaching and learning about the subject in Ogun State, Nigeria. That is, towards reducing the abstract assumptions in the subject and for ease of teaching and learning about it at the SSS level of education, and to accomplish the objective of teaching and learning about the content of the syllabus of study.

Study Area

Ogun State is one of the thirty-six states of the Federation, (Nigeria). In February 1976, the territory was carved out of the old Western State by the military administration of General Murtala Muhammed and General Olusegun Obasanjo. The new state was made up of the former Abeokuta and Ijebu provinces of the former Western State, which itself came into being when it was carved out of former Western Region in 1967. She is administratively divided into twenty (20) Local Government Areas. The state administrative affairs are presided over by the Executive Governor who is being assisted by the Deputy Governor. There is a legislative arm that is presided over by the speaker of the State House of Representative. On the other hand, the Local Government administrative affairs are presided over by the Executive Chairmen of the Local Government Councils.

She is fondly referred to as the Gateway State in rec-

ognition of its strategic position as the link by road, rail, air and sea to the rest of the country. Apart from Abeokuta, the capital, which is an important market centre and a terminus of the roads and railways coming from Lagos and other parts of the country, there are also other major towns like Sagamu, Sango, Ota, Ijebu-Ode and Ilaro.

The state is located in the Southwest Zone of Nigeria with a total land area of 16, 409, 26 square kilometers. It is bounded on the west by the Benin Republic, on the south by Lagos State and the Atlantic Ocean on the East by Ondo state, and on the North by Oyo and Osun states. It is situated between Latitude 6.2°N and 7.8°N and Longitude 3.0°E and 5.0°E.

The climate follows a tropical pattern with the raining season starting about March and ending in November, followed by dry season. The mean annual rainfall varies from 128cm in the southern parts of the state to 105cm in the northern areas. The average monthly temperature ranges from 23°C in July to 32°C in February. The Northern part of the state is mainly of derived savannah vegetation. While the central part falls in the rain forest belt. The extreme southern part has mangrove swamp.

The geographical landscape comprises of extensive fertile soil suitable for agriculture, and savannah land in the north western part of the state, suitable for cattle rearing. There are also vast forest reserves, rivers, lagoons, rocks, mineral deposits and oceanfront. South-west of the state is covered by mangrove swamp forest. Leaves, timber, firewood, yam stakes, sponge, fruits, seeds, herbs and others are a few of the resources from the forests.

Substantial proportions of the forest have been replaced by human activities, roads, residential buildings, offices and manufacturing industry buildings; and cultigens. The state is drained by Ogun, Oyan, Makun and Osun rivers and their tributaries. They all drain their waters into the Atlantic Ocean in the south. They are significantly known as sources of sharp sand used for building and constructions in the cities and towns of the state and in Lagos Metropolis.

The population of the state that is made up of Muslims, Christians, African traditional religion and atheists is 3,728,098. The population is dominated by Yoruba speaking people (Egbas, Ijebus, and Aworis). There is no other tribe of Nigeria that is not represented in the state particularly in her urban centres of Abeokuta, Ijebu-Ode, Shagamu, Ijebu-Igbo, Sango, Ilaro, Agbara, Ota and Ayetoro. There are a few of other nationals too - black and white. Over 45 % of the population is under 40

years old. Less than 10.50% is 70 years and above. Again, over 60% of the population is engaged in agricultural practices. About 25% of the remaining population is engaged in white collar jobs working in government secretariats, in the manufacturing industries; as teachers, and lecturers; and hospital workers. More than 10% of this proportion commutes to work from Sango, Ota, Shagamu and Ijebu-Ode, in particular, in Lagos Metropolis in the south (outside the state).

The over 60% of the populace that engage in agriculture plant cash crops (cocoa, rubber, oil palm tree and others) and some food crops (yam, maize, cassava, pepper, vegetables, coco-yam and others). There are pawpaw, plantain, banana and few economic trees growing wild. The guinea savannah to the north and west supports grazing of animals. Mechanized agriculture is not common yet.

Apart from the two state own Universities, there is a Federal University, and eight privately own universities. Other tertiary institutions include the Colleges of Education and Medicine; Schools of Nursing and Health; and the polytechnics – privately and publicly owned. There are over one thousand secondary schools and two and a half times that number of nursery and primary schools. Over 85% of them are privately owned. More than 45% of these are located within Ifo-Ota-Agba axis of the state. There are a number of manufacturing, food processing, brewery and other industries too. Notably among these are Ewekoro Cement Works, Shagamu Cement Works, 33 brewery at Imagbon (Ijebu-Ode), Bisrod Furniture, Ijebu-Ode, Ceramic Manufacturing Industry at Abeokuta, and Sona Brewery at Ota. A number of manufacturing and assembly plants are just springing up with the largest proportion still in Abeokuta - Ijebu-Ode – Shagamu – Ifo – ota - Agbara Complex. Garri, kolanut and oil palm, timber, Saw-milling and plank processing are among the light and local industries. Quarrying of granite, gravels and laterites is common in the state. The relatively good roads encourage hauling to the Metropolitan Lagos, the major market.

Though could be better, the state has good network of roads that link her with Lagos, Ekiti and Oyo states, and the Republic of Benin. Over 45% of these roads are dual-carriage ways. But, neither is there any sea nor air port. There have been proposal for a cargo airport. Railway traverse the state but train only convey passages to and from its extreme south end to Lagos Metropolis.

A few engage in international trades, but the Egbas and the Ijebus are noted for trade and commerce within and outside the state. They trade in agricultural produce

and retailing of imported manufactured goods and services. Again, apart from Government lock-up shops and stores, all major streets of the cities and towns have shops retailing goods and services or as bars and restaurants. There are few miniature shopping Malls at Abeokuta, Ijebu-Ode, Shagamu, Sango and Ota only.

Undoubtedly, it is a region of contrast. But, water, electricity, feeder roads, security, health care delivery system, unstable government policies and programmes and qualitative education are serious threat to development. It is regrettable to note that crime rate is high. The state is really a wholesome laboratory for particularly teaching and learning about SSS Geography as Aderogba, (1990) explain in her paper "Towards a maximum use of Local Environment, (Resources) for Effective Teaching and Learning about Geography in Nigeria Senior Secondary Schools"; and as Eya (1988) earlier presented.

METHODOLOGY

The entire WAEC, NECO and UME syllabuses of Geography were perused and salient aspects/ topics on (1) Elements of Practical and Physical Geography, (2) Human Geography, (3) Regional Geography of Nigeria, (4) Field Work, (5) Geography of Africa, and (6) Selected Topics were identified. WAEC note on all of these assisted to define the topics (content) of each part (WAEC, 2012). See the Appendix. Teachers of Geography (of not less than ten years of teaching experience; and holders of B.Sc., B.A. or B. Ed in Geography), in twenty five schools were interviewed on the materials and improvisation of materials for teaching and learning about various aspects of the subject. They also provided some solutions to the dearth of materials for teaching and learning. Above all, they were enthused and suggested what could be obtained where to improvise for teaching and learning, using the resources in the local environment. Two Hundred and fifty (250) students from twenty five (25) schools of the state were similarly asked questions about those aspects of the subject that were found difficult to learn about. They all succinctly outlined what may encourage effective teaching and learning about various aspects of the subject. Fifty (50) old students of Geography (thirty in tertiary institutions and twenty out of school) were similarly interviewed. Their opinions and suggestions do not differ significantly from those that were still in schools and colleges. The over thirty years of

experience of the author in the teaching of Geography was brought to bear. The words schools and colleges were used interchangeably in this work to mean formal places of study where Geography is taught and examined along with other school subjects at the SSS level of education.

FINDINGS

The entire syllabus is divided into six (WAEC 2012, NECO 2012 and JAMB 2012):

- Elements of Practical and Physical Geography;
- Human Geography;
- Regional Geography of Nigeria;
- Field Work;
- Geography of Africa; and
- Selected Topics.

The WAEC notes are replicas of NECO and UTME syllabuses. The materials and the procedure for teaching and learning about Geography for the three Examinations are the same; the schemes of works are also the same. See the Appendix. All aspects have material resources, animate and inanimate, tangible and intangible, that can be drawn from the local environment of the state for teaching and learning. See the Appendix.

DISCUSSION

The foregoing shows there is virtually no aspect of the subject that materials cannot be improvised for teaching and learning about. But, notwithstanding the suggested improvisations, the following are essential and imperative for effective teaching and learning about Geography at the Senior Secondary School (SSS) level of education;

- Extensive use of chalk and chalk board for sketching, drawing, demonstration and all others;
- Drawing and painting with different colours of chalk, chalk boards; and colour pencils on papers and card boards;
- Generous use of photographs and diagrams should not be compromised;
- Adequately equipped Geography Laboratory, one per school;
- Adequately equipped Geography Garden, one per school;
- Adequately equipped Meteorological Gardens, one per school;

— Home work and group assignments, simple projects and others;

— Visits to agricultural fields, agricultural practices around and within and around the school;

— Visits to mining of gravels, stone and other land/soil minerals;

— Extensive use of Atlas maps, Charts, Tables, Models and others where available;

— Field Work, Field Study, Field Trips, Excursions, and others should be undertaken and the learners made to study, observe, count, measure, sketch, play/fiddle, with examples, objects, materials, articles and others in the field;

— Reports should be written by students and moderated by the instructors /teachers;

— Everywhere, at all times, should be considered as laboratory and or an aspect of it for specific aspects of the subject: Forests and woods, grasses and swamps, springs, rivers and lakes, sunny and raining days, mountains and hills, residential areas, roads, paths, railways, flying aircrafts, ship, animals, birds, insects, human beings, workshops, schools and colleges, mosques, churches and other religious places of worship, industrial areas; (heavy and local), assembly plants, production centers, petrol filling stations, hospitals and maternity homes, sky and clouds in the sky; different vegetation covers and bare grounds; wind, households, family groups, compounds, communities and others; waste dumps, pipe borne water, schools and colleges, palaces of kings, king and the subjects, train stations, moving train and vehicles, markets, stores, articles of trade, manufactured goods, agricultural produce, erosion and erosion passages, soil and soil types, rocks and rock types, flowing rivers and their courses, features and land forms along river valleys; electricity poles, national grids, police posts/stations, post offices, rail lines just to mention a few around and in the immediate surroundings of schools;

— Use of Information Communication Technology (ICT) and internet for demonstrations, illustrations, applications and others to facilitate teaching and learning is equally imperative;

— Drawing and sketching of maps, filling and locating places and features on maps;

— Active participation in debates, quiz and essay competitions and others within and between schools and colleges, on geographical topics;

— References to past questions of WAEC, NECO and UTME examinations;

— Teachers/instructors regularly attending training and retraining programs, workshops, seminars, conferences, debates, up-grading and up-dating programs and others on Geography and Geography topics;

— Reference to examination marking guides by students and teachers of Geography; and

— Self/group examinations/revisions should be encouraged and supported by schools and parents.

At least, it was once written by a geography scholar that “peeping through the window of a classroom, you can easily improvise materials for teaching and learning about 88% of the topics in School Geography”, (Aderogba 1990). It is only a try that can convince one. Teachers and Laboratory Instructors may have to elaborately disabuse the minds of students and learners that Geography is not a wide, abstract and difficult subject. It is not; and every aspect is interesting to teach and learn about.

It should be of importance to note that an active, proactive and participative teacher would easily find, at least, a simple item for improvising for effective teaching of any specific topic/aspect in Geography anywhere, any time in Ogun state, (Nigeria).

CONCLUSION

Geography is a subject that teaches the interaction of man with his physical environment. It is useful as a school subject that a potential student of tertiary institution can combine with others to pursue professional and academic disciplines. A number of professional fields and professionals emerge from the discipline of Geography. There is no aspect of the subject, at the SSS level of education in Ogun state (Nigeria) that materials (animate and inanimate, tangible and intangible) for effective teaching and learning cannot be improvised. It requires active participation and pro-activeness of the teachers and learners. Use of ICT is imperative. A school van/bus is imperative for movement of students and teachers for Field Work/ Field Study/ Field Visits and others. Otherwise, school can hire commercial bus for the purpose. Again, as many as ten objectives can be targeted to be met within an outing. The first two years may be traumatic and cumbersome but subsequent years will be building on the existing materials and experiences.

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APPENDIX

The West African Examination Council (2004) Regulations, Syllabuses and Improvisation of Teaching Aid

S/N	CONTENTS	WAEC NOTES	Teaching Aid Improvisation
1	ELEMENTS OF PRACTICAL AND PHYSICAL GEOGRAPHY Map Work Elementary Survey Statistical Maps and Diagrams	Map reading and interpretation based on a survey map of part of West Africa: scale, measurement, distances, direction and bearing, map reduction and enlargement, identification of physical features such as spurs, valleys etc and cultural features such as city, walls, settlements, communication routes etc, measurement of gradients, drawing of cross profiles, inter-visibility, description and explanation of drainage patterns of communication settlement and land use. Chain and Prismatic compass, open and closed traverse avoiding obstacles in the field. Graphical representation of statistical data: Bar graphs, Line graphs, flow charts, pie charts, dot maps, proportional circles, density maps, isopleths maps.	Materials: Prototype topographical maps, Drawing as many as possible of topographical maps and photocopying same for each student to practice. Such topo maps can easily show contour lines, drainage patterns, contour lines, knoll, hills, plateaux, lakes settlements and their patterns communication lines and others. From the top map, several landforms and human activities could be identified. Distances could be measured, and gradients, intervisibility of points and others could be determined. Materials: Common table (square) tape rule, twine, note book, set square, angle, common straight pegs (short and tall), a group of five students. Common tape rule can be used in place of chain after a graphical example of chain might have been shown on the chalk board. Using either tape rule or common twine, with the supervision of the teacher can traverse avoiding obstacles in a school compound using a classroom as obstacle. Traverse legs and offsets are measured using tape rule. Individual students can form a straight line, on or with the use of long pegs. One a line with the other at the next end and one in between. One measuring the angles and the other takes the reading and do the pegging. Roles can be interchanged. A school Foot Ball Field is an example of a close traverse and a path in the school compound is an open traverse. Materials: A group of raw data on rainfall, temperature, trade volume, volume of traffic and others, sketch map. The data can be processed and put into a graph, chart, map and others.

	Elements of Physical Geography	The earth as a planet in relation to the sun. Latitude, longitude and time. Structure of the earth (internal and external).	Such data can be obtained from any text and or generated. To draw a map of a set of data for a particular place, there will be a sketch map of such place too. Other information about density, for example, will determine how the data will be scattered on the map. Where data are omitted or none existing, common interpolation is done. Materials: Water, clay, mortar and water colour/paint. Clay is well mashed and then moulded to spherical shapes of various sizes (of the sun and planets). This is painted with various colors of water bodies, low lands, higher land etc. Political and vegetational boundaries could be shown. On another spherical mould there can be lines of longitude and latitude. Still another one can be cut into two equal halves and differently coloured to show internal structure. Paper cuttings could equally show all these with little explanation. Various sizes of moulded clay can be made to represent different planet. The sizes will represent relative sizes of each planet to the other including the sun. All can be arranged in space with the aid of string and the sun to form the planetary system – in a Geography Laboratory.
(i)	Rocks	Types, characteristics, formation and uses. Mountains, plateaux, plains, karst and coastal landforms.	Materials: Cement mixtures, clay, samples of different rocks types, geographical garden. Efforts of the teacher to arrange various types of rock samples, sedimentary, igneous, metamorphic etc. at the Geography Laboratory and or geographical garden or geography corner will do the magic. Examples of resources derivable from each can be similarly arranged. Dormant volcanic erupted mountain, mountain, plateaux, plains, karst and coastal landforms are best improvised with casts in geographical garden. Use of cement cast with little artistic work each will be distinct and excellent. Clay mould can be used to depict these in Geography Laboratory and or class room. Pictures and drawings from internet could be used.

	(ii) Major Landforms	Agencies modify landforms such as weathering, running water, underground water, wind and waves. Fieldwork covering local landforms such as coastal features, drainage features, gullies, etc.	Materials: Cement mixture, clay, geographical garden, strings and others. Again various land forms are best presented in geography garden with casts. Valleys, braided river, tributaries, distributaries (delta) and others. How each came about could also be demonstrated with some water made to run from various slopes through pre-modified loose soil or mere mould of sand with obstacles along the slope. Erosion, along erosion passage, casting different structures on the way, can be good example of running water. Again, as suggested by WAEC, NECO and UME, Fieldwork covering local landforms such as coastal features, drainage features etc. should suffice.
	(iii) Oceans	Ocean basins, salinity, ocean currents (causes, types and effects on the climates of coastlands), water as an environmental resource.	Materials: Salt, water, drinking glass, transparent bowl, hand fan or standing fan or ceiling fan. A sketch of ocean floor on chalk board and water in transparent bowl of water can show ocean basin. Some moulds of clay and sand may be made to settle at the bottom of the basin to show certain terrain/configuration below the water-ocean floor. A little salt in a cup of water will turn saline. Dirts in ocean water make it become cloudy. — In a large bowl of water, blow winds with the aid of a hand fan or standing/ceiling fan, waves (currents) are created. Relate this to large body of water and circulating wind on water; circulating wind through the hot and cold regions. — Ocean Resource - sea foods, water, sand, salt, transportation routes – A chart showing canoe being paddled or a ship sailing on sea. Students can be made to enumerate what are obtained from sea and ocean waters that are known to them.
	(iv) Weather and climate	Simple weather study based on local observation description of the Stevenson's screen and uses of basic weather instruments e.g. rain gauge, thermometer, barometer and wind vane etc.	Materials: Matches and some pieces of paper, dusty ground, sticks and flowing gown; plastic funnel of 6-8cm diameter, calibrated bottle, a concrete cast of about 0.5m high, teak wood/stem of 3.4m Long/high, 2 pieces of sticks of 1.2m length each, plates made into letters N, E, S and W, an arrow head

			with tail, a five inches nail and thick plastic ball. Outside the classroom, make a small fire with the matches The flame and the smoke will follow direction of wind. Also use sticks to hit the dusty ground, you will see the direction of wind – where it is coming from and where it is going. Using cement concrete, a rain gauge stand can be constructed. The graduated bottle is placed inside the already prepared space for it and the funnel put in place – all at a height of under 1 meter from the surface of the ground. Rain water could be collected in graduated bottle in this way and measured. Using the 2 pieces of wood of 1.2m length stick, and the letters N, E, S and W, attached to each end of the stick, one each end; arrow head with tail, all made of metal plates a four cardinal point is constructed. This is mounted on the 3.4m length teak wood with the aid of hard/tough plastic ball to allow it rotate. It is erected perfectly perpendicular to the ground. It is without interference from any building or trees that will disturb wind flowing freely to it. Prevailing weather may be described. Photographs and diagrams could be used.
(v)	Elements of climate	Temperature, pressure, wind and precipitation and the factors affecting them e.g. altitude, latitude, ocean currents, land-and-sea breezes, continentality, aspect. Interpretation of climatic charts and data. Classification of climate (Greek and Koppen's). Major types of climate (Hot climate – equatorial, tropical and desert, temperate climate – warm and cool). The atmosphere as an environmental resource.	Materials: Sunny, hot days; raining, cold days, hamattan period/day, hamattan haze, large bowl of water, standing fan; a swimming pool around the school or better still, a large pool of water. A sunny day is bright and beautiful and it is hot. Heat is felt when it is hot. The shower of rain is visible. A rainy day is when the rain spans through considerable period of time of the day. It will be cold. Students use cardigans. During hamattan, it is dry, hazy and dusty. Visibility is greatly reduced too. Students should be reminded and or made to have a feel of it in its season. With a pool of water or in a large bowl of water, as the wind blows over it, a ripple of water is noticed. This is breeze. The breeze on water is a miniature form of ocean current. Compare this with large body of water. The ocean body and great winds over

			it. Go further to explain/relate it to ocean bodies, great winds blowing across the world-cold to hot region (continent).
(vi)	Soil	Definition, local types and characteristics. Factors and processes of soil formation and soil profile. Tropical soil types. Importance to man and the effects of human activities on soil.	Material Resources: Different soil samples from around the school compound e.g sand, clay, humus etc. Cutlass and hoes, rock samples etc. Mixture of weathering of rocks and degradable organic materials turn to humus soil, sand and sandy soil. Cutlass and hoes can be used to cut out a soil perfectly to some depth to show soil profile. This can be observed at fresh road cuttings - from particles, through humus soil to basement rock. Drawings could be used too.
(vii)	Vegetation	Major types (tropical rainforest, cool temperate, woodland, tropical grassland and temperate grassland); characteristics, distribution, factors affecting their distribution, plant communities. Vegetation as an environmental resource.	Material Resources: Timber at saw mills, fire wood, chewing sticks, leaves for bean cake, local sponge, planks with which school furniture are made, grasses around the school, trees around and within school compound. The type of trees and flowers (shrubs) show the type of plants (vegetation) that thrives in the environment. They are also selected resources from the forest. Where trees/forests/grasses have been cleared for roads; agricultural purposes, urban land use etc. are deforested areas. The school compound is another one. Use of photographs and diagrams is imperative.
(viii)	Aspects of Environmental Interaction	Land ecosystem, environmental balance and intervention within the natural environment.	Material Resources: The school compound, the rats in the bush around, plants and other animals in the bush, water, trees and other landforms around it, bear grounds, school field, school farm etc. These could be used to explain the concept of niche, habitat and ecosystem. Simple food chain could be explained with sun → grass → cow → man; or yam → rabbit → man. The difference between cultivated and uncultivated plants. The school premises and the undisturbed ecosystem can be compared. Students can have projects
(ix)	Environmental Hazards	Soil erosion, drought, desert encroachment, deforestation and	Materials: Erosion passages, running water during or after rains, cultivation

		pollution, causes, effects and prevention of each.	against slope on school farms and on the farms around, gutter and erosion passages. Imagination of extremities of dry and wet seasons with many attributes of dryness and wetness; and the hamattan haze. A look at gutter during and after rain will show corrosive work of running water. Dry season is next to drought and desert conditions. Any waste dump is polluted land; unclean gutter are polluted; stagnant water with refuse is polluted; air smelling and dusty is polluted and so forth.
2	HUMAN GEOGRAPHY		
	(i) World population	Factors and patterns of growth, distribution and movement; growth rate problems (e.g. Amazon as in, N.E. of USA, India, Japan, West coast of South Africa)	Materials: Two large settlements like Abeokuta and Ijebu-ode; and two small towns like Imaweje and Iju Okoto; government establishments, industries, water works known, hospitals, schools and colleges, transportation and commerce activities, stories of selected towns and villages known to the students. History helped or determined the growth and development of cities and towns. Employment opportunities, Government facilities and amenities etc. help settlement to grow and develop. Other things being equal, the more the number of amenities and facilities, the more the opportunities for employment, the bigger and the settlement.
	(ii) Settlement	Types (rural and urban); patterns and factors affecting location; growth and size; functions of rural and urban settlements (e.g. Western Europe, the Middle East and West Africa).	Materials: Drawing/ sketches of rural and urbanized settlements showing features of built-up areas –mosques, churches, schools, hospitals, roads, rails, post office and the sizes to scale relatively. Given known examples, what is rural may lack all or most of the above and vice-versa. Lack or scarcity of these and small size of the settlement tend to rurality. Visit to rural and urban communities and studying the attributes of both will suffice. Photographs and diagrams should be applied.
	(iii) Transport	Types (roads, railways, water, and air). Transportation and economic development (movement of people and commodities, national and international trade, diffusion of ideas and technology, national	Materials: Roads/paths that lead to school, railway around the school and or that might have been seen, Water in large rivers and sea (and ocean); the air above the school – up to 25,000 feet above sea level. people, animals,

		integration); problems of transportation.	articles of trade, goods and others in vehicles on roads that lead to schools and colleges are similarly those carried by rail, water and air transport except relative cost and bulkiness – between cities, towns, regions and nations. How waters drying up in most rivers is a challenge to water transportation; hamattan is a challenge to air travels since visibility is always reduced; and poor roads (some wash away) are predicament to road transportation. What is lacking in one region (town or nation) is transported to another - basis of trade. There is no Kolanut growing in northern Nigeria. Thus, it has to be transported there the market is there and vice-va-sa with Tatase and Pepper. There is little or no fish inland of the state thus it is taken inland from the south. Photographs and diagrams should be applied.
	(iv) Manufacturing Industry	Types (heavy and light industry); Factors of industrial location; contributions to Gross National Product (GNP) and problems.	Materials: For small/light industries: amala restaurant, carpentry workshop, blacksmith shop, motorcycle repairer's shop, mechanic village, bean cake kiosk, plantain and corn roaster kiosk and other. Heavy industry – cement factory at Ewekoro, cement factory at shagamu, 33 Breweries at Ijebu –Ode, Ceramic Industry at Abeokuta and others. Field visits to the locations of all (both categories) will explain some factors of location – accessibility raw materials, labour, market etc. Photographs and diagrams should be applied.
	(v) World Trades	Factors, major commodities (agricultural, manufactured goods and mineral products, trade routes, with special emphasis on trade between candidate's home country and the outside world.	Materials: Two known location in the world. United Kingdom and Nigeria. Goods produced in United Kingdom (electronics, tin foods, automobiles and others) and those in Nigeria (cashew, crude oil, cocoa, hides and skin). The goods of the two nations are required in exchange. Sketch maps can depict the trade routes by air and by water.
3	REGIONAL GEOGRAPHY OF NIGERIA	Nigeria on broad outlines (location, position, political divisions, physical setting, population distribution of mineral and power	Materials: Atlas maps, sketch maps of Nigeria and others. Students should be made to study, trace/ draw map of Nigeria and locate political boundaries,

		resources, industry and commerce, transportation). Geographic Regions of Nigeria (Eastern Highlands, Eastern Scarp lands, North-central Highlands, Sokoto Plains, Chad Basin, Niger Trough, Cross River Basin and Southern Coast. Each of these geographical regions should be under the following sub-headings:- (i) Physical settings; (ii) Peoples and population; (iii) Resources and economic activities; (iv) Transportation; (v) Problems of development.	physical setting, population distribution, major transport network, airports, sea ports and others; location of mineral resources, agricultural produce and others. Materials: Atlas maps, sketch maps, physical settings, Hausa/ Fulani man/woman, Yoruba man/ woman, Tiv/Benue man/woman, Igbo man/woman, Ijaw man/woman, Ibibio man/woman, Edo man/woman; common crops and others in the region. Trace/colour on sketch map where they could be found. Those found around the school and known somewhere else may be described. Student should be made to know where they came from, their food, mode of dressing, main religion etc. as distinct from others. Photographs and diagrams should be applied.
4	FIELDWORK	Field work on any one of the following should be based on local geography of candidate's home country. (This aspect of the syllabus should be examined in schools as part of the continuous assessment and should account for 25% of the total mark of continuous assessment): (i) Land use (rural or urban): Rural – crop farming (e.g. rice, cocoa etc), mining (e.g. coal, tin, petroleum etc), fishing. Urban – commercial activities, ports, factories, recreational etc. (ii) Market survey – rural or urban (iii) Traffic flow – rural or urban (iv) Patterns of journey to work – rural or urban (v) Rate of erosion in the locality etc	Materials: Sketch maps, school vans and others. With the guidance of the teacher, the student are made to study/observe, jot, sketch and draw specifics, e.g Rural land use such as agricultural land use (and what are planted), mining (and minerals mined) fishing; Urban land use such as market survey, traffic flow, pattern of journeys etc. Articles of trade, volume of sales, modes and forms of traffic, patterns of journey and others could be observed/recorded and described. From immediately around school compound or short distance away. Erosion – watching moving water in erosion passages, abrasive, transportation and deposition works observed, and recorded. Visit to any local market will show predominant articles of trade, how the stalls are arranged, times and intervals of marketing, major marketers, challenges and otherwise of the market.
5	GEOGRAPHY OF AFRICA	Africa on broad outlines – location, size, position, political divisions and associated islands, physical setting (relief, drainage, climate and vegetation); distribution of	Materials: Atlas maps of Africa, sketch map of Africa showing outline, location and position, political division, associated hills and mountains, climate, vegetation and distribution of

6	SELECTED TOPICS	major minerals. (a) Lumbering in equatorial Africa (with particular reference to Cote d'Ivoire and Zaire). (b) Irrigation agriculture in the Nile Basin and the Niger Basin. (c) Plantation agriculture in West and East Africa. (d) Fruit farming in the Mediterranean Regions of Africa. (e) Gold mining in South Africa. (f) Copper mining in Zaire and Zambia. (g) Oil production in Nigeria, Algeria and Libya. (h) Population distribution in West Africa. (i) International Economic Co-operation in West Africa (e.g. ECOWAS).	major mineral resources. Students should endeavor to draw sketches and locate places and features on sketch maps as Home Works and during class lessons. Materials: Atlas maps, sketch maps,. Students will be made to study, sketch and draw map of Africa and locate position of features and places and regions of for example, lumbering, irrigation agriculture, mineral mining, population distribution; regions of Africa – North, West Central, East and South Africa; and geography of each region. Materials: Any local mining or agricultural plantation; known economic activities, known location for lumbering and saw-milling activities and others. Let the students know favourable conditions for the existence of the practice where it exist; the significance of each to where it exists. Example oil production in Nigeria, Algeria and Libya; gold mining in South Africa and others. Visit to any local example will give the students an imagination of whatever is in other parts. The teacher should relate and give the conditions that favour it in such locations. Photographs and diagrams should be applied.
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