

**NATIONAL BUSINESS AND TECHNICAL EXAMINATIONS BOARD
GEOGRAPHY (196) - SYLLABUS**

INTRODUCTION

This syllabus has been designed from Nigerian Educational Research and Development Council (NERDC) for senior certificate categories. It is geared towards the achievement of the Millenium Development Goals (MDGs) and the critical elements of the National Empowerment and Development Strategies (NEEDS) of the Federal Government.

AIMS:-

Basically, Geography addresses issues that have to do with man and his socio-cultural and physical environment; its ability to help to circumvent the fundamental matters of environmental possibilism, determinism and probabilism. This syllabus is therefore designed to test the candidates' achievement of underlining course objectives.

OBJECTIVES:

At the end of this course, students should be able to:

- i. Show understanding of interrelationship between man and his environment;
- ii. Describe the regional geography of Nigeria and west Africa;
- iii. State the relationship between remote sensing and Geo-informatics system;
- iv. Show understanding of ozone layer depletion, desertification, land degradation, de-afforestation, among others occurrences affecting the world today;
- v. Discuss various geographical phenomena at global level, in term of industrialization, transportation, population amongst others;
- vi. Demonstrate knowledge of man's physical and human environment and how man lives and earns a living;
- vii. Understand and interpret topographical maps, compute statistical data, illustration with diagrams, and carry out basic field surveys;
- viii. Prepare Business and technical graduates to take up courses in tertiary institutions of learning

SCHEME OF EXAMINATION

The examination will be made up of two papers;

- 196-1 paper 1: (Objectives and theory), 130 marks (3 Hours).
- 196-2 paper 2: (Practical Alternative and Physical Geography), 100 marks (2 hours).

Paper 1: This consists of two sections Section A and Section B.

- Section A: this comprises fifty (50) multiple-choice questions to be answered by candidates in one (1) hour for 50 marks.
- Section B: This comprises eight (8) Essay questions in Human and Economic Geography, and Regional Geography. Candidates are to answer four (4) questions only. Two (2) questions in Human and Economic Geography, and two (2) questions in Regional Geography. Each of the Essay Questions carries 20 marks each for a total of 80 marks in a duration of two (2) hours.

Therefore, Section A is 50 marks, and Section B is 80 marks, totalling 130 marks.

Paper 2: This also consists of two (2) sections: Section A and section B.

- Section A: This consists of practical in Map Reading to be answered by candidates in One (1) hour for 40 marks.
- Section B: This comprises six(6) Essay questions in Physical Geography. Three questions are to be answered by candidates in one (1) hour at 20 marks each for a total of 60 marks.

Section A is 40 marks, and section B is 60 marks, with a total of 100 marks.

Therefore, paper 1 is 30 marks, and paper 2 is 100 marks with a grand total of 230 marks.

S/N	TOPIC/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
LOCAL GEOGRAPHY			
1.0	<p>Town/village</p> <p>1.1 Identify physical and cultural features of their town/village</p> <p>1.2 Locate the physical and cultural feature in relation to the school and its surrounding/environment</p> <p>1.3 Describe the influence of physical and cultural features of the town/village on human activities</p>	<p>i. Physical features</p> <ul style="list-style-type: none"> o Relief o Vegetation o Climate o Drainage etc. <p>ii. Cultural features e.g. Church, mosque, market, roads, settlements etc.</p> <p>iii. Direction and location of physical and cultural features within the town/village.</p> <p>iv. Influence on human activities e.g. farming, fishery, pottery, trade, etc.</p>	<p>a. Carry out field work</p> <p>b. Identify and locate the physical and cultural features of the town/village.</p> <p>c. Explain the location of physical and cultural features in relation to the town/village e.g. rivers, hills, streams, church, mosque, market etc.</p> <p>d. Draw a sketch map of the town/village showing the location, direction, distance of physical and cultural features in relation to the school.</p>
2.0	<p>The local Government Area (LGA)</p> <p>2.1 Identify the local government headquarters;</p> <p>2.2 Locate the village/town, ward and LGA;</p> <p>2.3 Explain the locational relationship between the LGA and other local Government Areas in the state;</p> <p>2.4 Describe the major physical features of the LGA in relation to the state.</p>	<p>i. LGA headquarters</p> <p>ii. Locational Relationship</p> <p>iii. Physical characteristics</p> <ul style="list-style-type: none"> • Relief • Vegetation • Climate • Drainage etc <p>iv. Economic Activities: E.g. transportation, agriculture, fishing, trade, etc.</p>	<p>a. Carry out field work</p> <p>b. Explain</p> <p>c. Location, direction and distance wards/villages/towns in the LGA.</p> <p>d. Physical characteristics of the LGA.</p> <p>e. Economic activities of the LGA.</p> <p>f. Draw a sketch map of the LGA; and</p> <ul style="list-style-type: none"> - Locate their village/town on the map, - Insert major physical features, - Show the major economic activities of the LGA.
THE EARTH AND THE SOLAR SYSTEM			
3.0	<p>The earth and other planets</p> <p>3.1 Identify the components of the solar system;</p> <p>3.2 Describe the position of the earth in relation to the sun and other planets;</p>	<p>i. Components of the solar system e.g. Mercury, Venus, Earth etc.</p> <p>ii. The earth</p> <ul style="list-style-type: none"> • Size • Shape • Position in relation to the 	<p>a. Demonstrate how to model Solar System.</p> <p>b. Use the model to identify and describe components of the solar system.</p> <p>c. Explain the:</p>

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	3.3 Proof the shape of the earth.	Sun and other planets.	<ul style="list-style-type: none"> - Shape and size of the earth. - Position of the earth in relation to the sun and other planets. d. Highlight the major features of the earth and other planets.
4.0	Earths rotation and revolution 4.1 Describe the phenomena of earths rotation and revolution; 4.2 Explain the effects of the earths rotation and revolution	i. Meaning of rotation and revolution. ii. Effects of rotation and revolution; <ul style="list-style-type: none"> • Day and night • Axis • Orbit • Seasons • Equinoxes • Solstice • Hemisphere, etc 	a. Use the globe and other models to demonstrate rotation and revolution b. Explain the effects of the earths rotation and revolution c. Highlight three major effects each of rotation and revolution
5.0	Latitude and longitudes 1.1 Define latitude and longitude; 1.2 Differentiate between latitude and longitude; 1.3 Describe the relationship between latitude and major regions of the world; 1.4 Use latitude and longitude to locate positions of towns, countries, cities, etc; 1.5 Deduce distances and local time from latitude and longitude.	i. Latitude; <ul style="list-style-type: none"> - Meaning of latitude - Equator - Latitude and distances - Relationship with major regions of the world (tropics of cancer and Capricorn, Arctic and Antarctic circles. ii. Longitudes: <ul style="list-style-type: none"> - Meaning of longitudes - Time and time zones - International dateline - Grid references 	a. Use the globe and map of the world to identify and explain: <ul style="list-style-type: none"> - Latitudes and longitudes - Equator - Meridian - Greenwich mean time (GMT) - International dateline - Grid references. b. Explain <ul style="list-style-type: none"> - The Equator - Relationship with major regions of the world - The meridian and the time zones, etc. c. Explanation on how to <ul style="list-style-type: none"> - Differentiate between latitude and longitude; - Determine distances using latitude; - Calculate local time of places from longitude

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6.0	The Earths structure 6.1 Identify the major spheres of the earth; 6.2 Identify the component layers of the earths crust; 6.3 Describe the characteristics of each Layer; 6.4 Draw and label the cross section of the earths interior; 6.5 Explain the relationship between the atmosphere, biosphere, lithosphere and hydrosphere.	i. Major spheres of the earth: - Atmosphere - Biosphere - Lithosphere - Hydrosphere ii. Relationship between the three sphere. iii. Relevance to human activities. iv. Structure of the earth - Crust - Mantle - Core	a. Use diagram and sketches to • Identify earths majorspheres • Identify the structure of earth crust b. Explain • Composition of the spheres • Structure and characteristics of crust, mantle and core • The relationship between the three major spheres and their relevance to human activities
7.0	Rocks 7.1 identify the major types of rocks; 7.2 Describe the structure of igneous sedimentary and metamorphic rocks; 7.3 State the distinguishing characteristics of different types of rocks; 7.4 Explain the process involved in the formation of rock types; 7.5 Explain the importance and disadvantages of rocks to man.	i. Types of Rocks - Igneous - Sedimentary - Metamorphic ii. Characteristics of rocks - Structure - Colour - Texture - Permeability i. Mode of formation of the rock types ii. Importance of rocks to man	a. Carry out field work to collect and classify rocks b. Explain • Structure, colour, texture and permeability of the rock types • Process for the formation of igneous sedimentary and metamorphic rocks • Importance of the rock types c. Prepare and album of rocks in the locality.
8.0	Mountains 8.1 Identify major mountain types; 8.2 State the distinguishing characteristics of the different types of mountains; 8.3 Explain the processes involved in the formation of the different mountain types; 8.4 Explain the importance and disadvantages of mountains to man.	i. Types of mountains - Volcanic - Fold - Block - Residual i. Characteristics of the mountain ii. Mode of formation of the mountain types iii. Importance of mountains - Minerals - Agriculture - Communication - Climatic effect etc	a. Use pictures and models to identify different mountains types b. Take a tour of the locality to observe highlands in the locality c. Explain: • Structure and characteristics of the mountain types • Process for the

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			Formation of the mountain <ul style="list-style-type: none"> Importance and disadvantages of mountains to man
9.0	Lowlands 9.1 Identify the major types of lowlands; 9.2 Describe the characteristics of the different types of lowlands; 9.3 Explain the processes involved in the formation of lowlands; 9.4 Explain the importance of lowlands to man.	i. Types of lowland: <ul style="list-style-type: none"> Valley Coastal Plain etc. ii. Characteristics of <ul style="list-style-type: none"> Valleys Plains Coastal areas. iii. Mode of formation of the lowlands. iv. Importance of lowlands.	a. Carry out field work to observe some lowlands. b. Use models, illustrative diagrams, pictures and sketches to explain: <ul style="list-style-type: none"> Characteristics of the different types of lowlands Processes for the formation of lowlands (valleys, plains and coastal areas) Importance of lowlands e.g. Agriculture, minerals, timber etc., Make models of the different types of lowlands
10.0	Earths External; processes and Landform Development: (a) Action of running water 10.1 Describe water as an energy system; 10.2 Explain Erosion processes of running water; 10.3 Explain the transportational processes/effects of running water in landform development; 10.4 Discuss the erosion and depositional features of rivers; 10.5 Describe and classify river basins into different types; 10.6 Name major river basins in Nigeria; 10.7 Explain the importance to community and human development.	i. Water as an energy system <ul style="list-style-type: none"> Slope or gradient Shape of valley Volume of river Size of materials carried ii. Processes of river erosion: <ul style="list-style-type: none"> Corrosion Attrition Hydraulic action iii. Transportation processes <ul style="list-style-type: none"> Suspension Saltation Solution iv. Erosional features of rivers <ul style="list-style-type: none"> Gorges V-shapes valleys Rivers captures Waterfall Meanders 	a. Carry out field work to observe effects of running water b. Use diagrams and sketch to explain corrosion, attrition, hydraulic action of rivers c. Explain <ul style="list-style-type: none"> Erosion and transportation processes Erosion and depositional features of rivers

S/N	TOPICS AND OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
		<ul style="list-style-type: none"> • Rapid and cataracts v. Depositional features: <ul style="list-style-type: none"> • Ox-bow lake • Flood plains • delta 	
11.0	<p>Action of winds</p> <p>11.1 Identify and describe the processes of wind erosion;</p> <p>11.2 Explain the features of and mode of formation of landforms;</p> <ul style="list-style-type: none"> ▪ inselberg ▪ Rock pedestal ▪ Zeugen ▪ Messa and butto, etc; <p>11.3 Describe the features of wind deposition.</p>	<p>i. Processes of wind erosion</p> <ul style="list-style-type: none"> • Abrasion • Attrition • Deflation <p>ii. Features and modes of formation of:</p> <ul style="list-style-type: none"> • Inselberg • Rock pedestal • Zeugen • Messa and butto, etc; <p>Features and modes of formations of:</p> <ul style="list-style-type: none"> • Barchans • Loess • Self dunes, etc. 	<p>a. Use pictures, films models and sketches to:</p> <ul style="list-style-type: none"> • Explain the processes of abrasion, attrition and deflation <p>b. Describe the features and formation of the following landforms:</p> <ul style="list-style-type: none"> • $\frac{3}{4}$ inselberg • $\frac{3}{4}$ rock pedestal • $\frac{3}{4}$ zeugen • $\frac{3}{4}$ messa and butto, etc. <p>c. Discuss the sequential formation and features of:</p> <ul style="list-style-type: none"> • Barchans • Loess • Self dune, etc
12.0	<p>(c) Glacial Action</p> <p>12.1 Describe the characteristics features of glacial actions in: highland, and lowland areas;</p> <p>12.2 Explain the modes of formation of these features and landforms</p> <p>12.3 Locate the countries/regions where features are found;</p> <p>12.4 State the economic importance of the features/landforms</p>	<p>i. Glacial features in highland areas:</p> <ul style="list-style-type: none"> • Cirque • Artes • Tan, etc <p>ii. Glacial features in lowland area:</p> <ul style="list-style-type: none"> • Roche mountains • Crag and trail, etc <p>iii. Economic importance of Glacial features</p>	<p>a. Uses films, pictures and modesto:</p> <ul style="list-style-type: none"> • Explain the characteristics features of landforms in glacial region • Using the world map, locate the countries/regions where these landforms are found. • Explain their modes of formation and economic importance • Make annotated diagrams of the landforms.

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13.0	Action of Waves 13.1 Distinguish between waves tides and currents; 13.2 Explain the process of wave erosion; 13.3 Describe the characteristic landforms/features of coastal erosion and deposition.	i. Waves/tides/currents (definition and characteristics) ii. Erosional processes: <ul style="list-style-type: none"> • Corrosion • Attrition • Solution • Hydraulic action iii. Erosional features <ul style="list-style-type: none"> • Cape • Bay • Caves • Staves, etc iv. Coastal deposition <ul style="list-style-type: none"> • Beaches • Spit • Bar • Marine dunes 	a. Take a field work to observe features of wave erosion and deposition. b. Use pictures, films and models to: <ul style="list-style-type: none"> • Explain the meaning and characteristics of waves, tide and currents • Explain erosional processes and coastal landforms • Identify and describe features of coastal erosion and deposition c. Make annotated diagrams for landforms
14.0	Earths Internal process (a) Earthquakes 14.1 Define earthquakes; 14.2 Explain the origin and focus of earthquakes; 14.3 Explain its causes; 14.4 Locate earthquake prone regions on world map; 14.5 Describe the effects of earthquakes on the environment	i. Origin/focus: <ul style="list-style-type: none"> • Tremor • Epicentre waves • Shock waves ii. Causes of earthquakes: <ul style="list-style-type: none"> • Faults from collision of tectonic plates • Sudden release of stress iii. Regions of earthquake occurrence: <ul style="list-style-type: none"> • Tonga region • Chile-Argentina region • Fiji Islands • Mid-Atlantic ridge • Some Asian Countries iv. Effects of earthquakes: <ul style="list-style-type: none"> • Displacement of earth crust • Raising and lowering of coastal rocks 	a. Use documentary films to explain <ul style="list-style-type: none"> • Meaning, origin/focus of earthquakes • Causes of earthquakes • Earthquake regions and their characteristic features • Effects of earthquakes on earths environment. b. Supervise how to insert earthquake regions on a world map.

S/N	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
		<ul style="list-style-type: none"> Raising and lowering of ocean floor Landslides and cracks, etc 	
15.0	(b) Volcanicity 15.1 Identify volcanicity; 15.2 Describe volcanicity processes; 15.3 Locate volcanic regions on a world map; 15.4 State the characteristics features of landforms in the regions.	i. Meaning of volcanicity ii. Processes; <ul style="list-style-type: none"> Crustal disturbance Intrusion Extrusion Eruption Emission, etc iii. Regions of occurrence iv. Characteristic features of landforms in the regions <ul style="list-style-type: none"> Intrusion features/landforms: <ul style="list-style-type: none"> Silk Dyke Batholiths accoliths Opoliths Phacoliths Extension features: <ul style="list-style-type: none"> Composite cone Java domes or shield Shield volcanoes Ash and cinder cones 	a. Use documentary films to explain: <ul style="list-style-type: none"> Volcanicity processes Volcanic regions of the world Intrusive features/land forms in volcanic regions Extrusive features/Landforms in volcanic regions Effects of vulcanity b. Insert volcanic regions on a world map.
16.0	(c) Karst (Limestone) Topography 16.1 identify Karst regions in Nigeria and the world; 16.2 State the characteristics of Karst topography 16.3 Identify and describe the surface and underground features of karst regions 16.4 Explain the importance of karst region to man	i. Karst topography region <ul style="list-style-type: none"> Characteristics of karst topography: <ul style="list-style-type: none"> Solubility Absence of luxuriant vegetation cover Absence of drainage Joints and rugged topography Dry surface valley, etc Features of karst regions <ul style="list-style-type: none"> ❖ Surface features: <ul style="list-style-type: none"> Grikes Clints Swallow holes 	a. Take a field tour experience of Karst regions (where possible). b. Use simple experiments, pictures, maps and documentaries to: <ul style="list-style-type: none"> Explain the characteristics of karst topography <ul style="list-style-type: none"> Locate the karst regions around the world especially in Nigeria Explain surface and underground features of karst region

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		<ul style="list-style-type: none"> • Sink holes • Doline • Uvalo • Pojes ❖ Underground features: <ul style="list-style-type: none"> • Caves and caverns • Limestone gorge • Resurgence or spring • Stalacties • Stalagmites • Pillar iii. Importance of Karst topography 	<ul style="list-style-type: none"> - Explain the importance of karst topography c. Make annotated diagrams of karst regions.
17.0	Denudational processes 17.1 Explain the concept of denudation; 17.2 Identify denudational processes; 17.3 Explain the factors affecting denudation	i. Meaning of denudation processes ii. Types of denudation processes <ul style="list-style-type: none"> • Weathering • Mass movement, etc iii. Factors affecting denudation: <ul style="list-style-type: none"> • Relief • Climate • Human activities, etc 	a. Use pictures, films and models to explain the meaning of denudation. b. Take a field tour to denudation sites. c. Explain: <ul style="list-style-type: none"> - Denudation processes - Factors affecting denudation Supervise field work.
18.0	Weathering 18.1 Define weathering; 18.2 Identify types of weathering; 18.3 Explain the process of each type 18.4 Explain the effects of weathering on the environment	i. Major concept: <ul style="list-style-type: none"> • Disintegration (expansion and contraction) • Decomposition (oxidation and carbonation) • Weathered debris, etc ii. Types of weathering: <ul style="list-style-type: none"> ❖ Physical (mechanical weathering): <ul style="list-style-type: none"> ❖ Temperature changes ❖ Wetting and drying ❖ Frost action, etc ❖ Chemical weathering: <ul style="list-style-type: none"> • Solution • Oxidation • Hydrolisis • Hydration • Carbonation ❖ Biological weathering <ul style="list-style-type: none"> • Plants and animals/burrowing • Human activities 	a. A take a field work to observe weathering effects (where possible). b. Use pictures, films and models to: <ul style="list-style-type: none"> • Explain the meaning of weathering. c. Supervise field work on weathering processes

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19.0	(b) Mass movements 19.1 Define the concept of mass movements 19.2 Identify types of mass movements 19.3 Describe the processes involved in the different types of mass movement, 19.4 Explain the effect of mass movement	i. Meaning of mass movements ii. Types of mass movements: - Slow (e.g. creep, soil flow) - Rapid mass movements (e.g. landslide, rock avalanche/rockfall, etc iii. Mass movement processes: ❖ Soil creep: - Weathered materials - Gentle slope - Water lubricates - Heating and cooling - Wetting and drying ❖ Soil flow: - Rock fragments - Down slope - Freezing - Thawing ❖ Landslides - Souse rock - Steep slope ❖ Water lubricates Rock fall Steep cliff, etc iv. Effects of mass movements	a. Take a field work (where possible) to observe mass movements. b. Show documentary films on mass movements. c. Use pictures, sketches and documentaries to: - Explain types of mass movements - Explain mass movements processes d. Explain the effects of mass movements on the environment and human activities
ENVIRONMENT AND ITS RESOURCES			
20.0	The Environment 20.1 Explain the meaning of the environment, 20.2 Identify the different types of environment; 20.3 Describe the components of the different environment; 20.4 Classify the different environments and their components into three major domains 20.5 Explain the importance of the environment to life	i. Meaning of environment ii. Types of environment - Physical - Social - Cultural iii. Domains of the environment - Atmosphere - Lithosphere - Biosphere - Hydrosphere iv. Importance of the environment	a. Conduct outdoor activities to observe the environment b. Explain the following: - Classification of mans environment as physical, social and cultural - The components of the different types of environment - Recognize and re-group components of the environment into three major domains (atmosphere, lithosphere and biosphere)

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21.0	Weather 21.1 Explain the concept of weather 21.2 Identify weather elements; 21.3 List the instruments for measuring weather 21.4 Describe the attributes of weather 21.5 Make accurate measurement of weather elements 21.6 State the importance of weather on physical and human activities	(i) Meaning of weather (ii) Weather elements (iii) Weather records - Temperature - Rainfall - Humidity - Wind direction and speed etc (iv) Attributes - Variability - Aerial extent - Duration etc (v) Importance of weather	a. Explain the concept of weather b. Explain the following: - Weather elements - Attitudes of weather - Importance of weather on physical and human activities c. Demonstrate how to make measurements and keep weather records
22.0	Climate 1 22.1 Explain the meaning of climate 22.2 List major elements of climate 22.3 Distinguish between climate and weather; 22.4 Locate the major climatic regions on the map of the world 22.5 Explain the influence of attitude, latitude, wind, ocean currents, etc on climate 22.6 State the importance of climate on physical and human activities	i. Meaning of climate ii. Elements of climate iii. Attributes - Variability - Aerial extent - Duration, etc iv. Factors affecting climate - Altitude - Latitude - Slope - Ocean currents - Cloud cover - Winds, etc v. Climate regions of the world vi. Importance of climate on physical and human activities	a. Explain the concept of climate b. Explain the following - Climate elements - Attributes of climate - Similarities and differences between weather and climatic; - Factors affecting climate; - Major climatic regions; importance of climate on physical and human activities
23.0	Climate II 23.1 Identify climatic factors; 23.2 Explain the effects of these factors on weather and climate; 23.3 Identify and explain the characteristics of major climatic types; 23.4 Locate and describe the distribution of the climatic types.	i. Climatic factors - Latitude - Attitude and relief - Planetary wind and pressure - Distance from the sea - Ocean currents etc. 1. Climatic types: - Temperature - Cold - Desert, etc. ii. Characteristics: Temperature, Rainfall etc. iii. Geographic distribution.	a. Use the globe, maps, diagram and sketches to explain climatic factors and their influence on weather and climate. b. Use maps, diagrams and sketches to identify major climatic types. c. Explain the characteristics of major climatic types/their geographic

S/N	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
			distribution; - Influence of climatic types on human activities d. Take a study trip to meteorological station
24.0	Climatic Classification 24.1 Describe the two climatic major classification systems; 24.2 Identify and explain the major and sub-categories of Koppens classification system; 24.3 Plot combined temperature and rainfall graphs of the classification systems; 24.4 Group and locate major climates of the world using the two classification systems; 24.5 State the advantages and disadvantages of the two classification systems.	i. Greek classification: - Tropical (torrid) - Temperature (mid-latitude) - Polar (frigid). ii. Koppens classification: Major categories of: $\frac{3}{4}$ A- A Tropical $\frac{3}{4}$ B-A Dry climate $\frac{3}{4}$ C-A Humid Micro-thermal $\frac{3}{4}$ D-A Humid Micro-thermal $\frac{3}{4}$ E-A Humid Micro-thermal Sub-categories of: $\frac{3}{4}$ A AAF, AM and AW $\frac{3}{4}$ B ABS and BW $\frac{3}{4}$ C ACW, CS and DW $\frac{3}{4}$ D ADF and DW $\frac{3}{4}$ E AET and EF. iii. Interpretation and characteristics of the sub-categories. iv. Geographical distribution v. Advantages of the classification types.	a. Use map the globe, sketches and diagrams to identify and classify climatic regions using the Greek and Koppens's classification systems. b. Explain: - Greek climatic Classification system - Interpretation and characteristics of Koppens's classification categories - Geographic distribution of climatic regions in the classification series - Advantages and disadvantages of each classification system. - Advantages and disadvantages of each classification system. - Plot temperature/rainfall graphs.

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25.0	Environmental resources 25.1 Define environmental resources; 25.2 Discuss the different types of environmental resources. 25.3 Give examples of each type, 25.4 Relate human resource quality to size, education, health etc. 25.5 Explain the importance of each type of environmental resources.	i. Meaning of environment resources ii. Types of environmental resources: - Atmospheric resources (e.g. sun, wind, biomass, oxygen and other gases, rain etc), - Water resources (eg. Waterfalls, plants, fishes and other water animals, etc), - Vegetation (eg. Timber, roots, leaves, barks, latex, fruits, fibres, etc), - Mineral resources, - Land resources. - Human resources. iii. Importance of environmental resources.	a. Use pictures, charts and maps to explain the meaning of environmental resources. b. Explain: - Types of resources - Components of each type of environmental resources - Quality of human resources in relation to size, skilled and unskilled human resources, education and health, etc, - Uses and importance of environmental resources.
26.0	Renewable and Non-Renewable Resources 26.1 Explain the concept of renewable and non-renewable resources; 26.2 Give example of each type; 26.3 State the advantages of each type	i. Meaning and examples of renewable and non-renewable resources ii. Advantages and disadvantages of renewable non-renewable resources	a. Uses pictures, charts and documentaries to explain the meaning of renewable and non-renewable resources. b. Take a tour to identify renewable and non-renewable resources. c. Explain the advantages and disadvantages of each type.
27.0	Environmental problems 27.1 Describe environmental problems and their causes; 27.2 Explain their effects on human activities; 27.3 Suggest solutions to the problems	i. Types and causes of environmental problems. ii. Effects of environmental problems of human activities. iii. Solutions to the problems.	a. Carry out field work to observe environmental problems and their causes. b. Use pictures and documentaries to explain: - Environmental problems and their effects on human activities, - Solutions to the problems.

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28.0	Environmental Conservation 28.1 Explain environmental conservation; 28.2 Discuss the different methods of environmental conservation; 28.3 Give examples of each type; 28.4 Explain the need/importance of environmental conservation.	i. Meaning of environmental conservation. ii. Environmental conservation methods: - Afforestation and re-afforestation, - Cover cropping, - Improved farming techniques, - Environmental education, - Recycling, - Legislation on waste disposal. iii. Importance of environmental conservation.	a. Use pictures, charts and maps to explain the meaning of environmental conservation. b. Explain - Types of environmental conservation. - Needs and importance of environmental conservation.
29.0	Climatic change 29.1 Explain the causes of climatic change. 29.2 Discuss the consequences of climatic change. 29.3 Explain measures the Nigerian government can take to prevent or remedy the problems.	i. Causes of climatic change: - Green-house effect - Ozone layer depletion - Chloro-floro carbon (CFC) gases - Carbon emission - Deforestation - Gas flaring, etc ii. Consequences of climatic change: - Melting of ice caps - Increasing temperatures - High rainfall - Submergence of coastal cities - Desertification - Cancer and eye cataracts - Emergence of new diseases - Extinction of some plants and animals, etc Remedies: - Reformation - Zero carbon emission - Population reduction - Introduce gas driven cars - Stop use of aerosols - Legislation, etc	a. Use documentaries, pictures etc, to: - Explain climatic changes - Explain causes and consequences of these changes on human environment - Give examples of observed consequences of climatic changes in towns in Nigeria e.g regular flooding of coastal towns like Lagos and portharcourt, - Desert encroachment in some cities in Northern Nigeria, etc, - Identify preventive measures/remedies to the problems

S/N	TOPIC/OBJECTIVES	CONTENTS	ACTIVITIES
REGIONAL GEOGRAPHY OF NIGERIA			
30.0	<p>Nigeria: location and position</p> <p>30.1 Describe the location and position of Nigeria with reference to her latitude. Longitude, boundaries and neighbours.</p> <p>30.2 Describe Nigeria by size and distance.</p> <p>30.3 Locate states, local government areas and their headquarters on the political map of Nigeria.</p>	<p>i. Location and position:</p> <ul style="list-style-type: none"> - Latitude - Longitude - Boundaries and neighbours. <p>ii. Size and distance</p> <ul style="list-style-type: none"> - North to South - East to West. <p>1. Political divisions:</p> <ul style="list-style-type: none"> - States and their capitals. - Local governments and their headquarters. 	<p>a. Use maps to describe the location and position of Nigeria with respect to her neighbours.</p> <p>b. (i) Describe the location of states and their capitals with reference to latitude and longitude.</p> <p>c. Determine the size, area and landmass of Nigeria</p> <p>d. Draw the political map of Nigeria and insert the states and their headquarters on the map.</p>
31.0	<p>Physical setting of Nigeria</p> <p>31.2 Identify the major highlands; rivers/drainage systems in Nigeria;</p> <p>31.2 Describe the climatic variations in the country;</p> <p>31.3 locate and explain the vegetation belts of Nigeria;</p> <p>31.4 Explain the importance and limitations of Nigerians physical setting.</p>	<p>i. Relief:</p> <ul style="list-style-type: none"> - Highlands and lowlands - Draining (major rivers, river basins, etc). <p>ii. Climate (the season).</p> <p>iii. Vegetation belts. (Savannah forest b belts).</p>	<p>a. Organise field work to observe the setting (relief, vegetation, etc) of the locality).</p> <p>b. Explain the following:</p> <ul style="list-style-type: none"> - Nigerians climate, characteristics of different seasons, etc, - Vegetation belts and their characteristics, - Merits and limitations of Nigerians physical setting (relief, climate, vegetation, etc). <p>c. Draw maps showing relief, climate and vegetation belts of Nigeria.</p>

S/N	TOPICS/OBJECTIVE	CONTENT	ACTIVITIES/REMARKS
32.0	Population of Nigeria 32.1 Explain the increase in growth of Nigerians population. 32.2 Account for the structure and distribution pattern of the population. 32.3 Describe the influence of HIV/AIDS and Ebola on population quality. 32.4 Explain population movement patterns and associated problems.	i. Population - Size - Distribution and structure ii. Population quality iii. Population movement iv. Population data	a. Observe population structure and distribution of the school and local environment. b. Explain the following: - Population, size, distribution and structure; - Population quality, factors influencing the quality of Nigerians population.
33.0	Resources of Nigeria 33.1 Identify and classify the different resources found in Nigeria. 33.2 Locate where these resources are found on the map. 33.3 Explain the importance of these resources to Nigeria.	i. Mineral resources - Petroleum - Gas - Coal - Tin/columbite - Iron ore - Lime stone. ii. Power: - Petroleum - Gas - Coal - Hydro Electric power (HEP) - Solar Energy. iii. Water Resources (rivers, lakes, dams, sea, underground water). iv. Vegetation (tree crops, food crops, cash crops, timber, etc). v. Vegetation: - Forests - Savannah - Biosphere vi. Importance of the Environment.	a. Identify the various minerals in Nigeria. b. Take a tour to observe local mining quarry sites etc. - Observe the vegetation and water resources within and around the community. c. Use a map to locate where Nigerians major resources are found. - Discuss the importance of these resources to Nigerians economy and development.

S/N	TOPICS/SUBJECTS	CONTENTS	ACTIVITIES/REMARKS
34.0	Agriculture 34.1 Describe major agricultural practices in Nigeria. 34.2 Identify major cash and food crops of Nigeria. 34.3 Locate where these crops are found on the map. 34.4 Explain the importance of agriculture; 34.5 Discuss the problems of agriculture in Nigeria 34.6 Suggest solutions to the problems.	i. Types of Agricultural practices: - Subsistence - Mechanised - Pastoral farming - Crop rotation - Mixed farming - Shifting cultivation. ii. Food and cash crops. iii. Importance of Agriculture. iv. Problems of Agriculture in Nigeria	a. Carry out a field work to observe agricultural practices b. Use maps, pictures, documentaries, films and slides, etc to explain - Types of Agricultural practices, Nigeria's major food and cash crops, and importance of Agriculture - Agriculture Agricultural problems in c. Nigeria. Draw the map of Nigeria and locate the major agricultural produce on the map.
35.0	Transport and communication in Nigeria (a) Transportation in Nigeria 35.1 Identify the major modes of transportation in Nigeria; 35.2 Draw maps of Nigeria showing road and rail transportation systems; 35.3 Discuss the advantages and disadvantages of the different transportation modes; 35.4 Explain the problems of transportation in Nigeria; 35.5 Suggest solutions to transportation problems.	i. Transportation ii. (a) Modes of transportation: <ul style="list-style-type: none"> • Road • Rail • Water • Air • Pipeline • Aerial ropeways • Human and animal portorage i. Advantages and disadvantage of the different transportation modes ii. Problems of transportation iii. Influence of transportation on human activities	a. Use pictures and documentary films to help identify and describe major modes of transportation in Nigeria. b. Explain: - Advantages and disadvantages of the transportation modes - Transportation problems in Nigeria - Influence of transportation on human activities. c. Draw maps of road and rail transportation systems in Nigeria.

S/N	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
36.0	<p>(b) Communication in Nigeria</p> <p>36.1 Identify the major communication networks/elements in Nigeria.</p> <p>36.2 Discuss the advantages and disadvantages of the different communication elements/networks.</p> <p>36.3 Explain the problems to communication in Nigeria.</p> <p>36.4 Suggest solutions to communications problems in Nigeria.</p>	<p>2. Communication in Nigeria</p> <p>i. Communication Networks:</p> <ul style="list-style-type: none"> - Telecommunication (e.g. telephone services, cellular phones, voice mails etc.) - Post services - Television Radio - Newspapers - Internet, etc <p>ii. Advantages and disadvantages of the different communication elements/networks.</p> <p>iii. Problems of communication in Nigeria.</p> <p>iv. Importance of communication on human activities.</p>	<p>a. Use pictures and documentary films to help identify and describe major communication elements in Nigeria.</p> <p>b. Take a tour to communication industries in the community.</p> <p>c. Explain</p> <ul style="list-style-type: none"> - Advantages and disadvantages of communication systems, - Communication problems in Nigeria, - Influence of communication on human activities
37.0	<p>Manufacturing industries in Nigeria</p> <p>37.1 Define manufacturing industries;</p> <p>37.2 Classify the industries as primary, secondary, tertiary and quaternary industries;</p> <p>37.3 Locate the major industrial zones on a map of Nigeria;</p> <p>37.5 Identify problems of manufacturing industries;</p> <p>37.6 Suggest solution to industrial</p>	<p>i. Definition of industry</p> <p>ii. Types of industry</p> <ul style="list-style-type: none"> - Primary - Secondary - Tertiary - Quaternary <p>iii. Major industrial zones</p> <p>iv. Factors affecting location of industries</p> <p>v. Problems and solution</p> <p>vi. Importance of manufacturing industries in Nigeria</p>	<p>a. Take a tour of manufacturing industries in the locality</p> <p>b. Use pictures, films, documentaries, maps etc to explain:</p> <ul style="list-style-type: none"> - Types of manufacturing industries - Major industrial zones - Factors affecting location of manufacturing industries
38.0	<p>Commercial Activities in Nigeria</p> <p>38.1 Identify major commercial activities in Nigeria;</p> <p>38.2 Describe the major commercial areas in Nigeria;</p> <p>38.3 Locate the major commercial zones on a map of Nigeria;</p> <p>38.4 Discuss the importance of commercial activities;</p> <p>38.5 Explain the importance of the stock exchange and capital Market to the commercial activities in Nigeria</p>	<p>i. Major commercial activities</p> <ul style="list-style-type: none"> - Trade <ul style="list-style-type: none"> • Local, national, • International • Stock exchange • Capital Market • FOREX - Transportation - Communication <p>ii. Major commercial areas in Nigeria:</p> <p>iii. Importance of commercial activities</p>	<p>a. Take a field work to identify commercial activities in the locality.</p> <p>b. Use pictures, films, documentaries, maps etc to explain:</p> <ul style="list-style-type: none"> - Nigerians trades, stock exchange, capital market, FOREX etc - Major commercial zones - Importance of commercial activities.

S/N	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
39.0	ECOWAS 39.1 State the meaning of the acronym (ECOWAS). 39.2 Identify ECOWAS member states. 39.3 Explain the purpose for which ECOWAS was formed. 39.4 State the advantage and disadvantages of ECOWAS. 39.5 Suggest solutions to ECOWAS problems.	i. Meaning of ECOWAS ii. Member countries iii. Purpose/mandate of ECOWAS iv. Advantages and disadvantages v. Solutions to ECOWAS problems	a. Explain the meaning of ECOWAS b. Obtain information from the internet on: - ECOWAS member states - Purpose and mandate, merits and problems of ECOWAS c. Explain solutions to ECOWAS. d. Visit internet café for information on ECOWAS. e. Locate the member states on a map..
MAP READING AND INTERPRETATION			
40.0	Basic concept in Map Reading 40.1 Define maps; 40.2 Identify with examples the differentiate between map and plan 40.3 Differentiate between map and plan 40.4 State the uses of maps; 40.5 Identify and describe types of scales and their attributes; 40.6 State the merits and demerits of the various types of scales; 40.7 Convert from scale to actual measurements.	i. Maps - Definition - Types - Examples - Uses ii. Scales and conversion - Types - Attributes - Merits and demerits of each type - Scale conversion	a. Show different types of maps. b. Identify maps and sort them into different classes/types. c. Explain the following: - Meaning, types and uses of maps; - Scales, types, attributes of different types of scales, merits and demerits of each type. - Demonstrate measurements of distance in scale - Convert scale measurements to actual measurements.

S/N	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
41.0	Map Distances 41.1 Identify units for expressing map distance; 41.2 Measure distance on a map and convert it to actual distance; 41.3 Convert actual distance to a map	i. Measurement and units. ii. Conversion - Conversion from map distance to actual distance. - Conversion of actual distance to map distance	a. Bring and identify different types of map reading. b. Identify units used in expressing distances in the map. c. Determine actual distances of physical settings (e.g. Length of rivers, distance between two cities measured as crow flies distances or curvilinear distances, etc) from map distances. d. Convert measurement of actual distances to map distances.
42.0	Map Reduction and Enlargement 42.1 Reduce a map to a given proportion. 42.2 Enlarge a map to a given proportion. 42.3 Plot details on enlarged/reduced maps. 42.4 Compare and contrast scales on an enlarged map and a reduced map. 42.5 Write new reduced/enlarge maps.	i. Map enlargement and reduction: - Grid/square method ii. Scales (small/large scales).	a. Provide topographical maps of different types to reduce/enlarge b. Demonstrate map reduction and enlargement. c. Help and guide how to: - Enlarge/reduce maps. - Compare details e.g. numbers, scales, etc on enlarged and reduced maps.
43.0	Interpretation of physical and cultural features 43.1 Define contour lines; 43.2 Identify and interpret physical features as represented on a map; 43.3 Identify and interpret cultural features on maps; 43.4 Explain the effects of physical and cultural features on human activities.	i. Contour lines. ii. Physical features: - Ridges - Spurs - Valleys - Hills - Plateau - Rivers etc iii. Cultural features: - Roads - Settlements - Schools - Communication lines - Markets, etc	a. Use maps to identify physical cultural features. b. Demonstrate how to identify and interpret cultural features on a map. c. Explain the relationship between physical and cultural features on human activities.

S/N	TOPIC/OBJECTIVE	CONTENT	ACTIVITIES/REMARKS
44.0	Direction and bearing 44.1 Identify major cardinal points; 44.2 Describe ways of showing direction; 44.3 Indicate and determine direction and bearing on a map;	i. The major cardinal points: - True and magnetic north - Magnetic variations - Angular bearings and compass direction	a. Explain the use of angular bearings and compass directions. b. Find directions and bearings of points on the field.
44.0	Direction and Bearing 44.1 identify major cardinal points; 44.2 Describe ways of showing direction; 44.3 Indicate and determine direction and bearing on a map; 44.4 Use direction and bearing to find the location of points on the field.	i. The major cardinal points: - True and magnetic north - Magnetic variations - Angular bearings and compass direction	a. Explain the use of angular bearings and compass directions. b. Find directions and bearings of points on the field. c. Locate the major cardinal points (i.e. north, south, east, west, north-east, north-west, south-east, south west) etc. d. Solve problems using examples from topographical maps
45.0	Representation of Relief Forms 45.1 Identify physical features on topographical maps. 45.2 Describe methods of representing these features (relief) on maps. 45.3 Construct topographical maps using the methods to represent physical features in their discrete forms.	i. Physical features (relief); - Valley - Spur - Pass - Knoll - Conical Hills, etc. ii. Methods of representing relief - Contour - Hill shading - Relief colouring - Spot heights - Hachure, etc.	1. Display different types of maps. 2. Use maps, models etc to help recognize relief features on maps. 3. Use sand trays and ashes to demonstrate the formation of contour lines. 4. Explain methods of representing relief features on maps.

S/N	TOPIC/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
	ECONOMIC AND HUMAN GEOGRAPHY		
46.0	<p>Transportation</p> <p>46.1 Identify and describe different modes of transportation.</p> <p>46.2 List transportation means associated with each mode.</p> <p>46.3 Highlight the merits and demerits of each transportation mode/mean;</p> <p>46.4 Explain the contributions of transportation to economic development.</p> <p>46.5 Identify transportation problems and suggest ways of solving them.</p>	<p>i. Modes of transportation:</p> <ul style="list-style-type: none"> - Road - Rail - Water - Air - Pipeline - Cable, Etc. <p>ii. Transportation means.</p> <p>1. Merits and demerits of each type.</p> <p>iii. Importance</p> <ul style="list-style-type: none"> - Movement of people and commodities - National and international trade - Transfer of ideas and technology - National integration - Transportation problems. 	<p>a. Use maps diagrams, pictures, etc to identify major transportation types.</p> <p>b. Explain the merits and demerits of each type in terms of:</p> <ul style="list-style-type: none"> - Accessibility - Flexibility - Haulage capacity - Speed, etc. <p>c. Describe transportation problems and proffer solutions.</p>
47.0	<p>Industry</p> <p>47.1 Identify and classify industries</p> <p>47.2 Discuss the major industries in Nigeria and other parts of the world.</p> <p>47.3 Locate major industries area in Africa, Asia, Europe, America, etc.</p> <p>47.4 Describe the factors that encouraged these locations.</p> <p>47.5 Identify and discuss the problems of industrial development in Nigeria and the rest of the world.</p> <p>47.6 Industrial development in Nigeria and the rest of the world.</p>	<p>i. Classification of industries:</p> <ul style="list-style-type: none"> • Primary - Secondary - Tertiary - Quaternary • Heavy industry - Light industry <p>ii. Factors affecting industrial location</p> <ul style="list-style-type: none"> - Raw materials - Markets - Capital, etc. <p>iii. Problems of industrial location.</p>	<p>a. Locate major industrial regions on the world map:</p> <ul style="list-style-type: none"> - Identify and describe major industries of the world - Classify the industries - Discuss The factors the encouraged spatial differentiation in industrial location. <p>b. Visit industries in their locality and observe production processes and interview workers in the industry.</p>

S/N	TOPIC/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
48.0	<p>Population</p> <p>48.1 Describe world population in term of size, density, structure and distribution patterns.</p> <p>48.2 Account for the variation in world population.</p>	<p>i. World population</p> <ul style="list-style-type: none"> ▪ Size ▪ Distribution patterns ▪ Density ▪ Structure <p>ii. Factors affecting population distribution</p> <ul style="list-style-type: none"> ▪ Climate ▪ Relief ▪ Soil ▪ Water ▪ Mineral, etc. 	<p>a. Use maps, diagrams, pictures, documentary, films, etc to explain world population with respect to size, density, structure and distribution patterns.</p> <p>b. Explain the influence of climate, relief, soil, water, mineral resources, etc on population density and distribution.</p> <p>c. Make sketches of world population distribution on a map.</p>
49.0	<p>Settlements</p> <p>49.1 Identify types of settlements;</p> <p>49.2 Describe each settlement type in terms of population, economy, administration, etc;</p> <p>49.3 Explain the influence of soil weather, etc. On settlement location;</p> <p>49.4 Identify and explain the major settlement patterns;</p> <p>49.5 Explain the factors responsible for the development of each patterns.</p>	<p>i. Types of settlements:</p> <ul style="list-style-type: none"> - Urban - Rural <p>ii. Characteristics of urban and rural settlements:</p> <ul style="list-style-type: none"> - Population - Economy - Administration, etc. <p>iii. Factors of settlement location (soil, weather, etc).</p> <p>iv. Settlement patterns:</p> <ul style="list-style-type: none"> - Nuclear - Dispersed (scattered) - Linear - Isolated - Conurbation <p>v. Factors of development of each pattern.</p>	<p>a. Use maps and sketches to identify human settlements</p> <p>b. Take a tour on field work to observe human settlement patterns in the locality</p> <p>c. Explain:</p> <ul style="list-style-type: none"> - Settlement types - Characteristics of urban and rural settlement location - Settlement patterns and their developmental factors.

S/N	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
50.0	<p>Settlement interaction</p> <p>50.1 Discuss types of settlements interactions;</p> <p>50.2 Explain settlements interaction patterns with respect to migration.</p>	<p>i. Types of interaction:</p> <ul style="list-style-type: none"> - Commercial - Cultural - Administrative, etc <p>ii. Interaction patterns:</p> <ul style="list-style-type: none"> - Urban-rural - Urban-urban - Rural-rural, etc 	<p>a. Carry out a field work to observe settlement interaction patterns in the locality</p> <p>b. Use diagrams, sketches and flowcharts to explain:</p> <ul style="list-style-type: none"> - Types of interactions - Settlement migration - Factors responsible for migration of settlements
51.0	<p>Geo-political Issues (land Reclamation)</p> <p>51.1 Explain the concept of land reclamation.</p> <p>51.2 Describe the various methods for land reclamation.</p> <p>51.3 Explain the importance of land reclamation.</p>	<p>i. Meaning of land reclamation.</p> <p>ii. Reclamation methods:</p> <ul style="list-style-type: none"> ▪ Afforestation ▪ Construction of barriers ▪ Sand filling ▪ Construction of drainages ▪ Control of erosion head, etc. <p>iii. Importance of land reclamation.</p>	<p>a. Use photographs of reclamation sites to explain the concept of land reclamation.</p> <p>b. Take a tour to land reclamation sites.</p> <p>c. Explain</p> <ul style="list-style-type: none"> • Methods of land • Reclamation importance of land • Reclamation organize and supervise • community development project on reclamation
52.0	<p>Trade</p> <p>52.1 Define trade;</p> <p>52.3 Explain the different types of trade;</p> <p>52.3 Explain why trade occurs;</p> <p>52.4 Explain the importance of trade.</p>	<p>i. Definition of trade</p> <p>ii. Types of trade:</p> <ul style="list-style-type: none"> - National - International <p>iii. Reasons for trade</p> <p>iv. Importance of trade:</p> <ul style="list-style-type: none"> - Social - Political - Economic, etc 	<p>a. Visit places where trading of different types take place.</p> <p>b. Use documentaries, illustrations, pictures and photographs to:</p> <ul style="list-style-type: none"> - Explain the meaning of trade - Identify types of trade - Explain the economic, social and political importance of trade

S/N	TOPIC/OBJECTIVES	CONTENT	ACTIVITIES/REMARKS
53.0	Tourism 53.1 Define tourism. 53.2 Identify and locate tourist centres on a map. 53.3 Explain the importance of tourism. 53.4 Identify problems of tourism and suggest solutions to the problems.	i. Meaning of tourism ii. Tourist centres iii. Justification for tourism: - Leisure - Recreation - Education - Importance of tourism - Problems of tourism	a. Take a visit to recreational facilities in the locality. b. Use documentaries, illustrations, pictures and photographs to: - Explain the meaning of tourism - Locate world tourist centres and identify the attractions to the places - Explain economic, social and political importance of tourism. - The problems and solutions of tourism
INTRODUCTORY GEOGRAPHIC INFORMATION SYSTEM			
54.0	Basic concept of GIS 54.1 Explain the meaning of GIS and geographic data; 54.2 Describe the sources of geography; 54.3 Distinguish between geographic data and GIS; 54.4 State the importance of geo-referencing; 54.5 State the uses of the GIS and geographic data.	i. Geographic Information System (GIS) ii. Geographic data: - Meaning/Examples - Line for river, roads, rails, etc. - Points for boreholes, building, settlements, towns, farms, etc. - Sources (maps, field work, satellite images, etc.). iii. Importance of geo-referencing, geographic data and the GIS.	a. Explain the concept of GIS and geographic data. b. Carry out field work to: - Collect geographic data, - GIS laboratory. c. Participate in group discussion on: - Geographic data e.g. maps, data from field work, satellite images etc; - Geo-referencing for GIS data. d. Explain the importance of geo-referencing.
55.0	Components of GIS 55.1 Identify GIS hardware and software; 55.2 State the uses of the GIS software; 55.3 Distinguish between positional; 55.4 and relational data 55.5 State the rules for GIS;	i. Hardware components; - Digitizer - Global positioning system (GPS) - Computer - Printer - Scanner, etc. ii. Software for:	a. Do the following - Identify GIS hardware - Identify the various software and their uses - Distinguish between positional

S/N	TOPIC/OBJECTIVITIES	CONTENTS	ACTIVITIES/REMARKS
55.6	Identify GIS-human ware.	<ul style="list-style-type: none"> - Data input - Storage - Retrieval - Manipulated iii. Data - Positional - Relational iv. Procedures: sets of rules v. People: experts 	<p>and a relational data</p> <ul style="list-style-type: none"> - Use the GIS, hardware e.g. digitizer, GPS, Computer, etc b. Explain: <ul style="list-style-type: none"> - Data types (positional and relational data) - GIS procedures/sets of rules - Human components of GIS, their training/qualification
56.0	GIS Data 56.1 Identify sources of data in GIS environment; 56.2 Collect data for GIS	i. Data sources: <ul style="list-style-type: none"> • Land surveying • Remote sensing • Map digitizing • Map scanning • Field investigation • Tabular data, etc 	a. Explain GIS data sources b. Take a field work to collect geographic data, using various methods c. Supervise field work
57.0	Satellite Remote Sensing 57.1 Define the following concepts, remote sensing, satellite and satellite remote sensing; 57.2 Explain the applications of remote sensing; 57.3 Explain the relationship between remote sensing and GIS.	i. Definition of concepts: <ul style="list-style-type: none"> - Remote sensing - Satellite - Satellite remote sensing ii. Application of satellite remote sensing: <ul style="list-style-type: none"> - Forestry - Environment - Agriculture - Telecommunications - Transportation - Emergency response, etc iii. Relationship between GIS and remote sensing 	a. Explain the following with examples: <ul style="list-style-type: none"> - Remote sensing - Satellites e.g Nigeria Sat-1, IKONOS, SPOT radar, NICOM Sat-1, ERS-1 etc - Satellite remote sensing b. Take a field work to satellite remote sensing site. c. Supervise field work. d. Explain applications of remote sensing and the relationship between GIS and remote sensing.

LIST OF RECOMMENDED TEXTBOOKS IN GEOGRAPHY

- 1) Comprehensive Certificate Geography for Schools and colleges by Iboaya B. A. (2013) (Revised Edition).
- 2) Human Geography by Fellmann, D. et al (2005) (Seventh Edition) New York: McGraw Hill.
- 3) Introduction to Geography by Getis, A. et al (2004) (Ninth Edition) New York: McGraw Hill. Contemporary World Regional Geography by Bradshaw, M. et al (2004), New York: McGraw Hill.
- 4) A Regional Geography of Africa by Okunrotifa, P.O. and Michael, S. (2000) (New Edition), Essex: Longman.
- 5) Map Reading for West Africa by Nimaku, D.A. (2000), Essex: Longman.
- 6) General Geography in Diagrams for West Africa by Bunnet, R.B. and Okunrotifa, P.O. (1999), China: Longman.
- 7) Geography: An Integrated Approach by Waugh, D. (1995), (Second Edition) China: Nelson.
- 8) A New Geography of West Africa by Iloeje N.P. (1991), Hong Kong: Longman.
- 9) Certificate Physical and Human Geography by Adeleke, B.O. and Leong, G.C. (1990) (West African Edition), Ibadan: Oxford.
- 10) A New Geography of Nigeria by Iloeje N.P. (1982), (New Edition) Hong Kong: Longman.
- 11) Geographical Region of Nigeria by Udo, R.K. (1970), London: Longman.
- 12) New Secondary Atlas by Collins-Longman (1981), Hong Kong: Sheck Wah Tong.
- 13) Macmillan Secondary School Atlas.