

REPUBLIC OF LIBERIA

MINISTRY OF EDUCATION



NATIONAL CURRICULUM FOR GRADES 10 TO 12

GEOGRAPHY

February 2011

MESSAGE FROM THE MINISTER OF EDUCATION

I wish to extend my thanks and appreciation to ECSEL, UNESCO and all our partners for their immense contribution to this important task of revising and strengthening of the National Curriculum. Special thanks to USAID through LTTP for their funding and technical support in the harmonization or realignment of the curriculum. We extend sincere thanks and appreciation to the Bureau of Curriculum Development and Textbook Research, the National Curriculum Taskforce, and the subject specialists from various institutions for the level of professionalism that went into this exercise.

The revision and strengthening of our National Curriculum comes at a time when our nation is faced with the Herculean task or challenge of education transformation, national reconstruction, recovery and renewal in the aftermath of a devastating civil war. Hence, critical to this national challenge is the rebuilding of the education sector as Liberians can not achieve the desired socio-economic progress in the absence of a strong, vibrant and productive education and training system.

The revised national curriculum has two features which include the regular core subject areas of Mathematics, Science, Language Arts and Social Studies and emphasis is being given to the global challenge of HIV/AIDS, Peace, Citizenship, Human Rights and Environmental education. Secondly, the new curriculum is developed in line with international standards especially those practiced and enshrined in the curriculum of our sisterly Republic of Nigeria and Ghana who are also members of the West African Examinations Council (WAEC) .

We wish to urge all our education partners including students, teachers, principals, proprietors of schools and members of school boards to use this curriculum in our schools to enhance quality and relevant instruction and to enable our students to be adequately prepared to take the West African Senior Secondary Certificate Examinations (WASSCE) come 2013 as envisaged by us in the education sector.

May I conclude by once again saying big thank-you to all those who contributed to make this project a success.

Hon. E. Othello Gongar **MINISTER**

INTRODUCTION

The study of Geography is essential for the proper understanding of the interaction between man and his physical and cultural environments. The activities of human beings on earth are continually influenced by the physical environment, just as the physical environment is also profoundly influenced by human activities. For sustainable living on our planet, therefore, we need to obtain a deeper understanding of this human-environment interaction, and how best to manage it. Geography is also about how human beings interact with each other, and the social, cultural, economic, and political institutions that are established to regulate this interaction. This curriculum in Geography for Liberian Senior High School students has been designed, therefore, to develop the requisite knowledge, skills, competencies, values and attitudes that would make for a sustainable existence on our planet, as well as lay a solid foundation for the more advanced study of Geography.

A student-centred approach is emphasized in this curriculum. This is based on the firm belief that learning becomes more permanent, meaningful, and exciting when students themselves take ownership of the learning process. Teachers are, therefore, urged to contrive those classroom strategies that would engage students actively in the teaching/learning process.

AIMS AND OBJECTIVES

Upon the completion of this course of study, students will be able to:

- 1. Acquire and improve their skills and techniques for accurate and orderly geographical investigations to be carried out both in the classroom, and on the field.
- 2. Explain facts about the earth its shape, structure and evolving characteristics.
- 3. Examine the facts that shape the earth's surface, and its interior.
- 4. Understand the concepts of water cycle and their interrelationships.
- 5. Explain human-environment interrelationship.
- 6. Analyze and discuss human activities that threaten environment safety.
- 7. Interpret in practice map-land relationships.
- 8. Apply geographical theories and concepts in real life problem solving.

PERIOD: <u>I</u>

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) - THE EARTH AS A PLANET

TOPIC: THE SOLAR SYSTEM

GENERAL OBJECTIVES: Upon completion of this Unit, students will be able to:

- 1. Discuss the components of the solar system and their relevance to life on earth.
- 2. Describe how the planets move through space.
- 3. Describe the shape of the earth.
- 4. Analyze the effects of the earth's movements.
- 5. Determine, by calculation and demonstration, local time and standard time differences between places on different meridians.
- 6. Determine, through demonstration and calculation, linear distances using latitudes.

SPECIFIC OBJECTIVES: Upon completion of this topic, students will be able to:

- 1. Define the term *Solar System*.
- 2. List planets in the order of their distances away from the sun.
- 3. Identify the planetary position of earth in space.
- 4. State and relate the earth's position to the existence of animal and plant life.
- 5. Demonstrate a full understanding of the rotation, and the revolution of the earth.
- 6. Analyze the effects of the earth's rotation and revolution on human activities on earth.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/RESOURCES	EVALATION
Students will be able to	1. The Solar System	1. Give demonstrative	A. Primary Text	- Essential tasks students should be
clearly relate life on the	a) Definition	exercises on time	General Geography in	able to do:
earth to its planetary	b) Galaxy	calculation.	Diagrams (Pearson)	1. Define the term <i>Solar System</i> .
position in space.	c) Milky way			2. List planets in the order of their
		2. Compare various	B. Secondary Texts	distances away from the sun.
	2. The Planets	time zones.	Abegunde, et al. Senior	3. Identify the planetary position of
	a) Definition		Secondary Geography Bk. 1	earth in space.
	b) Characteristics	3. Demonstrate the	Map reading for west Africa	4. State and relate the earth's position
	c) Natural Satellites	concept of rotation		to the existence of animal and plant

	 3. The Sun a) Definition b) Characteristics c) Importance of the sun 4. The Moon a) Definition b) Characteristics c) Phases d) importance of the moon as a satellite of the earth 	and revolution by separate groups of students.	Certificate Physical and Human Geography C. Other Resources/Supplementary Readings Globe Football Flashlight Pictures of the solar system Planetarium	life. 5. Analyze the effects of the earth's rotation and revolution on human activities on earth. 6. Reports on visual observations made at clear night of the sky. 7. Demonstrate the earth's rotation and revolution Other essential evaluation tools: • Quizzes • Demonstrations • Oral questions & answers • Assignments • Written observations
--	---	--	---	--

PERIOD: <u>I</u>

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – THE EARTH AS A PLANET

TOPIC: SIZE AND SHAPE OF THE EARTH

SPECIFIC OBJECTIVES:

Upon completion of this topic, students will be able to:

- 1. Define the concepts Equatorial Circumference, Equatorial Diameter, Polar Circumference, and Polar Diameter.
- 2. With the use of a string, ruler and orange or egg, measure:
 - a) Equatorial circumference
 - b) Polar circumference
 - c) Polar diameter
 - d) Equatorial diameter
- 3. Provide proof of the shape of the earth.

5

OUTCOMES Appreciate the earth's position and movements in space, and their effects on and kind.	CONTENTS 1. Earth's Dimension a) Equatorial circumference b) Equatorial diameter c) Polar circumference d) Polar diameter e) Differences in length between equatorial circumference f) Differences in length between equatorial diameter and polar diameter 2. Shape of the Earth a) Description b) Proof of the Earth's spherical shape. c) Inferential, Aerial photographs. d) Circumnavigation of the	ACTIVITIES 1. Using a string, ruler and orange or egg, students will measure: a) Equatorial circumference b) Polar circumference c) Polar diameter d) Equatorial diameter	MATERIALS/RESOURCES A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 1 Map reading for west Africa Certificate Physical and Human Geography C. Other Resources/Supplementary Readings Globe Football Flashlight Pictures of the solar system Planetarium	Evaluation Essential tasks students should be able to do: 1. Upon completion of this topic, students will be able to: 2. Define the concepts Equatorial Circumference, Equatorial Diameter, Polar Circumference, and Polar Diameter. 3. With the use of a string, ruler and orange or egg, measure: (a) Equatorial circumference (b) Polar circumference (c) Polar diameter (d) Equatorial diameter (e) Equatorial diameter (f) Porvide proof of the shape of the earth.
	spherical shape. c) Inferential, Aerial photographs.		FlashlightPictures of the solarsystem	Cartif.

PERIOD: <u>I</u>

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – THE EARTH AS A PLANET

TOPIC: THE EARTH'S MOVEMENTS

SPECIFIC OBJECTIVES:

- 1. Define the concepts *rotation* and revolution of the earth.
- 2. Explain the differences between the two concepts.
- 3. Explain the terms associated with the rotation and revolution of the earth.
- 4. Describe the effects of the earth's rotation and revolution
- 5. State Ferrell's law on the deflection of winds and ocean currents

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Appreciate the earth's	1. The Rotation of The Earth	1. Practical	A. Primary Text	Essential tasks students should be
position and	a) Definition	demonstration of	General Geography in Diagrams	able to do:
movements in space,	b) Effect of rotation, day and night,	finding the	(Pearson)	1. Define the concepts <i>rotation</i>
and their effects on	different time, daily rising and	altitude of the		and revolution of the earth.
and kind.	falling of the tides, deflection of	mid-day sun.	B. Secondary Texts	2. Explain the differences between
	winds and ocean currents.		Abegunde, et al. Senior Secondary	the two concepts.
	c) Ferrell's law on the deflection of		Geography Bk. 1	3. Explain the terms associated
	winds and ocean currents		Map reading for west Africa	with the rotation and revolution
				of the earth.
	2. The Revolution of the Earth		Certificate Physical and Human	4. Describe the effects of the
	a) Definition		Geography	earth's rotation and revolution
	b) Terms associated with the			5. State Ferrell's law on the
	revolution of the earth (axis		C. Other	deflection of winds and ocean
	orbital plane, hemisphere		Resources/Supplementary	currents
	equinoxes, solstices, dawn		Readings	6. Practical demonstration of
	twilight etc.)		Globe	finding the attitude of the
	c) Effect of revolution		Football	midday sun.

d) Similarities and Differences between rotation and revolution	 Flashlight Pictures of the solar system Planetarium

PERIOD: <u>I</u>

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – THE EARTH AS A PLANET

TOPIC: LATITUDE LONGITUDE AND TIME

SPECIFIC OBJECTIVES:

- 1. Define the terms *latitudes* and *longitudes*.
- 2. Name the major latitudes and longitudes.
- 3. State the uses of longitudes and latitudes.

OUTCOMES	CONTENTS		ACTIVITIES	MATERIALS /	EVALUATION
				RESOURCES	
Appreciate the earth's	1. Latitudes	1.	Students in their small groups	A. Primary Text	Essential tasks
position and movements	a) Definition		with the globe will identify	General Geography in	students should be
in space, and their effects	b) Major latitudes:		and show the importance of	Diagrams (Pearson)	able to do:
on and kind.	i) Equator (0 ⁰)		the lines, longitude and		1. Define the terms
	ii) Tropic of Cancer (23 ½ ⁰ N)		latitude.	B. Secondary Texts	<i>latitudes</i> and
	iii) Tropical of Capricorn (23 ½ S)			Abegunde, et al. Senior	longitudes.
	iv) Arctic Circle (66 ½ ⁰ N)	2.	Students will compare and	Secondary Geography Bk. 1	2. Name the major
	v) Antarctic Circle (66 ½ 0 S)		contract great circles and	Map reading for west Africa	latitudes and
			small circles		longitudes.
	2. Uses of Latitudes			Certificate Physical and	3. State the uses of
	a) Calculation of linear distances			Human Geography	longitudes and
	b) Determination of climatic zones,				latitudes.
	natural vegetation, types of flora or			C. Other	4. Problem solving

fauna etc. 3. Longitudes a) Definition b) Major longitudes – Greenwich or prime meridian, the international date line, central meridians 4. Uses of Longitudes a) Calculation of time difference b) Determining the position of a place on the globe or map. c) Great circles and small circles	Resources/Supplementary Readings Globe Football Flashlight Pictures of the solar system Planetarium	on the calculation and linear distances. 5. Discuss the similarities and differences between lines of latitude and longitude.
5. Fraticuless a) Finding positions on maps		
6. North And South Poles a) Values (in degrees) b) Types of north: i) True North ii) Magnetic north iii) Grid north iv) Magnetic declination		

PERIOD: II

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – THE EARTH AS A PLANET

TOPIC: THE EXTERNAL STRUCTURE OF THE EARTH

GENERAL OBJECTIVES: Upon completion of this Unit, students will be able to:

- 1. Account for the importance of the structure of the earth.
- 2. Discuss the distinguishing external and internal features of the earth.
- 3. Discuss the mode of formation of the three classes of rocks.
- 4. Explain clearly the importance of rocks to man.

SPECIFIC OBJECTIVES:

- 1. Distinguish between the external and internal layers of the earth.
- 2. Name the main layers of the external structure of the earth.
- 3. Name the main layers of the internal structures of the earth.
- 4. Discuss the distinguishing features of the geologic layers of the earth's surface.
- 5. Discuss the distinguishing features of the external layers of the earth's surface.
- 6. Name the three classes of rocks.
- 7. Describe the mode of formation of each rock type.
- 8. States the main characteristics of each rock type.
- 9. States the main uses of rocks, using specific examples for illustration.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Acknowledge the importance of the earth's structure. Appreciate the importance of rock types. Analyze the living effects of the geologic zones of the earth.	1. Lithosphere: a) Definitions of lithosphere b) Characteristics and components a) Importance of the lithosphere b) Problems and solutions 2. Hydrosphere: a) Definition of hydrosphere b) Characteristics and components c) Importance of the hydrosphere d) Problems and solutions 3. Atmosphere a) Definition of atmosphere b) Characteristics and composition c) Importance of the atmosphere d) Problems and solutions 4. Biosphere a) Definition of biosphere b) Characteristics and components. c) Importance of the atmosphere d) Problems and solutions	 Group discussion on rock texture. Hardness and color of rock pieces / samples. Draw a simplified diagram of the earth's internal and external structure. 	A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 1 Map reading for west Africa Certificate Physical and Human Geography C. Other Resources/Supplementary Readings Globe Football Flashlight Pictures of the solar system Planetarium	 Essential tasks students should be able to do: Distinguish between the external and internal layers of the earth. Name the main layers of the external structure of the earth. Name the main layers of the internal structures of the earth. Discuss the distinguishing features of the geologic layers of the earth's surface. Discuss the distinguishing features of the external layers of the earth's surface. Name the three classes of rocks. Describe the mode of formation of each rock type. States the main characteristics of each rock type. States the main uses of rocks, using specific examples for illustration. Chalk board demonstration of the four shapes of the earth. State the importance of the external and internal structure of the earth. Describe the interaction between the four spheres of the earth. Describe the interaction between the four spheres of the earth.

PERIOD: II

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – THE EARTH AS A PLANET

TOPIC: THE INTERNAL STRUCTURE OF THE EARTH

SPECIFIC OBJECTIVES:

Upon completion of this topic, students will be able to:

1. Define and locate the following:

- a) The Crust
- b) The Mentle
- c) The Core
- 2. Describe the composition of each.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Acknowledge the	1. The Crust:	1. Group discussion on rock	A. Primary Text	Essential tasks students
importance of the	 a) Definition and location 	texture. Hardness and color of	General Geography in	should be able to do:
earth's structure.	b) Parts of the crust layer (upper	rock pieces / samples.	Diagrams (Pearson)	1. Chalk board
	(sail), and lower (Siam).			demonstration of the four
Appreciate the	c) Importance of the crust	2. Draw a simplified diagram of	B. Secondary Texts	shapes of the earth.
importance of rock		the earth's internal and	Abegunde, et al. Senior	
types.	2. The Mentle:	external structure.	Secondary Geography Bk. 1	2. Explain the importance of
	 a) Definition and location 		Map reading for west Africa	the external and internal
Analyze the living	b) Description and composition	3. Stretch a rubber band to		structure of the earth.
effects of the geologic	c) Importance of the crust	illustrate faulting.	Certificate Physical and	
zones of the earth.			Human Geography	3. Identify different rock
	3. The Core	4. Students will compress their		samples.
	 a) Definition and location 	face towels to illustrate	C. Other	
	b) Description and composition	folding.	Resources/Supplementary	4. Define and locate the
	c) Parts of the core (outer and inner)		Readings	following:
	d) Importance of the core		• Globe	a) The Crust
			• Football	b) The Mentle
	4. Diastrophism		• Flashlight	c) The Core

a) Plate tectonic and the theory of	Pictures of	the solar
continental draft	• system	5. Describe the composition
b) Effects	Planetarius	n of each.
c) Faulting and folding		

PERIOD: II

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – THE EARTH AS A PLANET

TOPIC: ROCKS AND THEIR FORMATION

SPECIFIC OBJECTIVES:

- 1. Define rocks and minerals.
- 2. Classify rock types.
- 3. List the characteristics of rocks.
- 4. Define the Mentle and describe its location.
- 5. Describe its composition, and the importance of the crust.
- 6. State the uses of rocks.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Acknowledge the	1. Rocks and Minerals:	1. Group discussion on rock texture.	A. Primary Text	Essential tasks
importance of the earth's	a) Definition	Hardness and color of rock pieces /	General Geography in	students should be
structure.	b) Classification of rock into types	samples.	Diagrams (Pearson)	able to do:
	i. Igneous			1. Chalk board
Appreciate the importance	ii. Metamorphic	2. Draw a simplified diagram of the	B. Secondary Texts	demonstration of
of rock types.	iii. Sedimentary	earth's internal and external	Abegunde, et al.	the four shapes of
	iv. Formation of rock	structure.	Senior Secondary	the earth.
Analyze the living effects			Geography Bk. 1	
of the geologic zones of	2. The Mentle:	3. Collection and identification	Map reading for west	2. State the
the earth.	a) Definition and location		Africa	importance of the
	b) Description and composition			external and

c) Importance of the crust	Certificate Physical	internal structure
i. Igneous	and Human	of the earth.
ii. Metamorphic	Geography	
iii. Sedimentary		3. Collect and
d) Characteristics of rock:	C. Other	correctly classify
i. Texture	Resources/Suppleme	rock samples.
ii. Structure	ntary Readings	
iii. Color	• Globe	4. Students will
iv. Permeability	• Football	match rock
	• Flashlight	samples with their
3. Uses of Rock	• Pictures of the	types and uses
a) Igneous	solar	respectively.
b) Metamorphic	• system	
c) Sedimentary	Planetarium	

PERIOD: III

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – MAJOR LANDFORMS

TOPIC: MOUNTAINS

GENERAL OBJECTIVES: Upon completion of this Unit, students will be able to:

- 1. Understand that the structure of the earth is changing all the time.
- 2. Examine the processes of mountain formation.
- 3. Account for the importance of major landforms.

SPECIFIC OBJECTIVES:

- 1. Identify the types of major landforms.
- 2. Describe and use diagrams to illustrate the formation of major landforms.
- 3. Account for the formation of each major landform.
- 4. Analyze the importance of major land forms.
- 5. Discuss the problems of major landforms.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Develop the ability to distinguish between one landform and another Cope with the two-way influence of landforms and people. Appraise the dual effects of forces that produce landform	 1. Fold Mountains a) Definition and Description Definition b) Types: Simple folds, and Complex folds c) Formation of fold mountains d) -Importance of fold mountains e) Source of minerals, source of timber and wood, HEP production,	 Organize field trips to observe various landforms in Liberia. Let students make sketches of the landforms they observed. The location of Fold Mountains, Volcanic Mountains, Residual Mountains and Block Mountains on the world physical maps. 	A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 1 Map reading for west Africa Certificate Physical and Human Geography C. Other Resources/Suppleme ntary Readings Globe Football Flashlight Pictures of the solar system Planetarium	Essential tasks students should be able to do: 1. Sketch various landforms and classify them. 2. Compare pairs of mountains with their types 3. Identify the types of major landforms. 4. Describe and use diagrams to illustrate the formation of major landforms. 5. Account for the formation of each major landform. 6. Analyze the importance of major land forms. 7. Discuss the problems of major landforms.

4. Residual Mountains		
a) Definition and description		
b) Formation of Residual mountains		
c) Importance of Residual mountain		
i. Mineral deposits		
ii. Communication masts		
iii. Tourism		
iv. Agriculture (Transhumance).		
d) Disadvantages of Residual		
mountains		

PERIOD: III

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – MAJOR LANDFORMS

TOPIC: PLATEAUS

GENERAL OBJECTIVES: Upon completion of this Unit, students will be able to:

- 1. Understand that the structure of the earth is changing all the time.
- 2. Examine the processes of mountain formation.
- 3. Account for the importance of major landforms.

SPECIFIC OBJECTIVES:

- 1. Define and describe the following:
 - a) Tectonic Plateaus
 - b) Intermont Plateaus
 - c) Lava Plateaus
 - d) Dissected Pleateau.
- 2. State how the different plateaus are formed

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Develop the ability to	1. Tectonic Plateaus	Organize field trips to observe	A. Primary Text	Essential tasks
distinguish between one	a) Definition and description	various landforms in Liberia	General Geography in	students should be
landform and another	b) Formation of Tectonic Plateaus		Diagrams (Pearson)	able to do:
		2. Let students make sketches of the		1. Sketch various
Cope with the two-way	2. Intermont Plateaus	landforms they observed.	B. Secondary Texts	landforms and
influence of landforms	a) Definition and description		Abegunde, et al.	classify them.
and people.	b) Formation of Lava Plateaus		Senior Secondary	2. Define and
			Geography Bk. 1	describe the
Appraise the dual effects	3. Lava Plateaus		Map reading for west	following:
of forces that produce	a) Definition and description		Africa	e) Tectonic
landform.	b) Formation of Lava Plateaus			Plateaus
			Certificate Physical	f) Intermont
			and Human	Plateaus
	4. Dissected Plateaus		Geography	g) Lava
	a) Definition and description			Plateaus
	b) Formation of Dissected Plateaus		C. Other	h) Dissected
	c) Importance of Plateaus:		Resources/Suppleme	Pleateau.
	i. Mineral deposits		ntary Readings	
	ii. Climate moderation		• Globe	3. State how the
	iii. Communication masts, etc.		 Football 	different plateaus
	d) Disadvantages Of Plateaus		 Flashlight 	are formed
			 Pictures of the 	
			solar	
			• system	
			 Planetarium 	

PERIOD: III

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – MAJOR LANDFORMS

TOPIC: PLAINS

GENERAL OBJECTIVES: Upon completion of this Unit, students will be able to:

1. Understand that the structure of the earth is changing all the time.

- 2. Examine the processes of mountain formation.
- 3. Account for the importance of major landforms.

SPECIFIC OBJECTIVES:

- 1. Name and describe the characteristics of the different types of plains.
- 2. State how the plains are formed.
- 3. State the importance and disadvantages of the types of plains.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Develop the ability to	1. Coastal Plains	1. Organize field trips to observe	A. Primary Text	Essential tasks
distinguish between one	 a) -Definition and Description 	various landforms in Liberia	General Geography in	students should be
landform and another	b) -Formation		Diagrams (Pearson)	able to do:
	c) -Importance of Coastal Plains:	2. Let students make sketches of the		1. Name and describe
Cope with the two-way	i) Agriculture	landforms they observed.	B. Secondary Texts	the characteristics
influence of landforms	ii) Tourism		Abegunde, et al.	of the different
and people.	iii) Mineral deposits		Senior Secondary	types of plains.
	iv) Quarrying		Geography Bk. 1	2. State how the
Appraise the dual effects	v) Settlement		Map reading for west	plains are formed.
of forces that produce	vi) Communication, etc.		Africa	3. State the
landform.	d) Disadvantages of Coastal Plan			importance and
			Certificate Physical	disadvantages of
	2. Outwash Plains		and Human	the types of plains.
	a) Definition and Description		Geography	4. Sketch various
	b) Formation			landforms and

c) Importance of Outwash plains:	C. Other	classify them.
i) Tourism ii) Agriculture	Resources/Suppleme ntary Readings	
iii) Mineral deposits	• Globe	
iv) Settlement, etc.	• Football	
d) Disadvantages of Outwash plains.	• Flashlight	
 3. Alluvial Plains a) Definition and Description b) Formation c) Importance of alluvial plains: d) Disadvantages of alluvial plains 	 Pictures of the solar system Planetarium 	

PERIOD: <u>IV</u>

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – MAJOR LANDFORMS

TOPIC: INTERNAL PROCESSES OF LANDFORM DEVELOPMENT

GENERAL OBJECTIVES: Upon completion of this Unit, students will be able to:

- 1. Understand the processes that cause the development of the hydrological cycle.
- 2. Analyze the effects of the various agencies that modify landforms.
- 3. Describe the effects of erosion, and ways to minimize its impact on the environment.

SPECIFIC OBJECTIVES:

- 1. Describe the processes that cause the development of the hydrological cycle.
- 2. Explain the Hydrological Cycle.
- 3. Define groundwater, and explain the terms associated with it.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Students will appreciate the importance of underground water to man. Examine the destructive effects of earthquakes and Vulcan city on both artificial features. Students will develop strategies to harness fulcanicity to the benefit of man.	1. Hydrological Cycle a) Definition b) Terms associated with hydrological cycle: i. Overland flow ii. Infiltration through flow iii. Evaporation, condensation, etc c) Importance of the hydrological cycle 2. Groundwater a) Definition b) Terms associated with groundwater: i. Zone of permanent saturation ii. Springs iii. Wells iv. Artesian basins etc. c) Features produced by groundwater: stalagmites, stalactites, pillars, etc	 Students will draw diagrams to illustrate hydrological cycle. Students will collect samples and identify permeable and impermeable rocks. Conduct experiment to practicalize water table. 	A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 1 Map reading for west Africa Certificate Physical and Human Geography C. Other Resources/Suppleme ntary Readings Globe Football Flashlight Pictures of the solar system Planetarium	Essential tasks students should be able to do: 1. Observation and writing reports 2. Field practices on the effect of underground water 3. Name and identify external and internal agencies that produce landforms. 4. Describe the processes that cause the development of the hydrological cycle. 5. Explain the Hydrological Cycle. 6. Define groundwater, and explain the terms associated with it.

PERIOD: <u>IV</u>

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – MAJOR LANDFORMS

TOPIC: EXTERNAL AGENTS

GENERAL OBJECTIVES: Upon completion of this Unit, students will be able to:

1. Analyze the effects of the various agencies that modify landforms.

2. Describe the effects of erosion, and ways to minimize its impact on the environment.

SPECIFIC OBJECTIVES:

- 1. Define the terms weathering, mass wasting, and weathering.
- 2. Name the types of each external agent.
- 3. Explain what causes each.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Examine the destructive	1. Weathering	1. Organize field trips to observe the	A. Primary Text	Essential tasks
and constructive effects of	i) Definition	effects of soil creep.	General Geography in	students should be
the agents that produce	ii) Type: Mechanical and Chemical		Diagrams (Pearson)	able to do:
landform.	iii) Pro changes, frost action, repeated	2. Group discussion on the ways of		1. Define the terms
	writing and drying, biotic action	controlling land-use patterns.	B. Secondary Texts	weathering, mass
Create ways of limiting	solution, hydration, hydrolysis,		Abegunde, et al.	wasting, and
the negative impacts of the	oxidation, and carbonation.		Senior Secondary	weathering.
agents that produce	iv) Effects of weathering		Geography Bk. 1	2. Name the types of
landform.	v) Importance of weathering,		Map reading for west	each external
	breakdown of soil nutrients,		Africa	agent.
	aeration, etc.			3. Explain what
			Certificate Physical	causes each.
	2. Mass Wasting		and Human	4. Write a report on
	i) Definition		Geography	the destructive
	ii) Types of mass wasting, soil creep,			effects of
	mud flow, land slide, rock fall (rock		C. Other	earthquakes and

avalanche)	Resources/Suppleme	volcanic eruption
iii) Features of mass wasting scar	ntary Readings	on disc.
altered slope, Deloris, etc.	• Globe	
iv) Effect of mass wasting.	• Football	
	Flashlight	
3. Earthquakes i) Definition and terms epicenter focus, magnitude, intensity, seismograph, seismic waves, tsunamis, etc ii) Causes iii) Effect of earthquakes, migration, destruction of infrastructure,	 Pictures of the solar system Planetarium 	
Displacement of population, etc.		

PERIOD: IV

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – PROCESSES OF LANDFORM DEVELOPMENT

TOPIC: INTERNAL AGENTS (VULANICITY)

GENERAL OBJECTIVES: Upon completion of this Unit, students will be able to:

1. Analyze the effects of the various agencies that modify landforms.

2. Contrive ways of limiting the negative impacts of the agents that produce landform

SPECIFIC OBJECTIVES:

- 1. Define vulcanicity.
- 2. State the causes of vulcanicity.
- 3. Describe the features produced by volcanic action.
- 4. State the effects of vulcanicity.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Examine the destructive	1. Vulcanicity	1. Group discussion on the	A. Primary Text	Essential tasks
and constructive effects of	i) Definition and terms	ways of controlling land-use	General Geography in	students should be
the agents that produce	ii) Causes	patterns.	Diagrams (Pearson)	able to do:
landform.	iii) Features produced by vulcanicity			1. Observation and
	actions (intrusive): Batholiths, dykes,	2. Use of video clips on	B. Secondary Texts	writing report on
Create ways of limiting	Skills, Laccoliths, Geysers, etc.	earthquakes and vulcanicity.	Abegunde, et al. Senior	the destructive
the negative impacts of the	iv) Features produced by volcanic actions		Secondary Geography Bk. 1	effects of
agents that produce	(intrusive): Composite cone, ash and		Map reading for west	earthquakes and
landform.	cinder cone, lava plateau, lava plain,		Africa	volcanic eruption
	crater, caldera, etc.			on disc.
	v) Effects of vulcanicity: Tourist		Certificate Physical and	
	attraction, mineral deposits, fertile		Human Geography	
	soils.			
			C. Other	
			Resources/Supplementary	

	Readings	
	• Globe	
	 Football 	
	 Flashlight 	
	 Pictures of the solar 	
	• system	
	 Planetarium 	

PERIOD: <u>V</u>

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – AGENTS MODIFYING LANDFORMS

TOPIC: RUNNING WATER

GENERAL OBJECTIVES: Upon the completion of this topic, student will be able to:

Examine the work of the agents that effect changes on landforms.
 Analyze the effects and control of agents that modify landforms.

3. Understand the various processes that cause the development of ground water.

SPECIFIC OBJECTIVES: Upon completion of this topic, students will be able to:

1. Describe the processes of river erosion.

Name and describe the types of river erosion.
 Analyze the factors influencing river deposition.

4. Explain the components of drainage.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Examine the destructive	1. River Erosion	 Organize field trips to 	A. Primary Text	Essential tasks
effects of river erosion.	i) Process: Corrosion Hydraulic	observe the impacts of	General Geography in	students should be
	Action, and Solution	wave erosion along the	Diagrams (Pearson)	able to do:
Create ways of limiting	ii) Types of River Erosion: Headward,	beaches of Liberia.		1. Observation and

the impacts of coastal	vertical, and Lateral.		B. Secondary Texts	written reports on
erosion.	iii) Features produced by River	2. Discuss, in groups, ways of	Abegunde, et al. Senior	river erosion.
	Erosion: V-valley, Interlocking	controlling erosion by	Secondary Geography Bk. 1	2. Describe the
	Spurs, Pot Holes, Waterfalls and	water.	Map reading for west Africa	processes of river
	Rapids, Gorges and Canyons, etc.			erosion.
			Certificate Physical and	3. Name and describe
	2. River Transport		Human Geography	the types of river
	i) Process: Traction, Siltation,			erosion.
	Suspension, and Solution.		C. Other	4. Analyze the
			Resources/Supplementary	factors influencing
	3. River Deposition		Readings	river deposition.
	i) Factors Influencing River		Globe	5. Explain the
	Deposition.		• Football	components of
	ii) Feature produced by River		 Flashlight 	drainage.
	Deposition: Flood plain, Braided		• Pictures of the solar	
	river, ox-bow lake, Levee, Deferred		• system	
	tributary, and Delta.		Planetarium	
	4.75			
	4. Drainage			
	i) Components of drainage			
	ii) Drainage Patterns: Dendritic,			
	Trellis, Radial, etc.			
	iii) Features produced by super			
	imposed drainage.			

PERIOD: <u>V</u>

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – AGENTS MODIFYING LANDFORMS

TOPIC: ACTIONS OF WINDS

SPECIFIC OBJECTIVES: Upon completion of this topic, students will be able to:

1. Define wind erosion and describe its processes.

2. Describe the depositional features of wind.

3. Analyze the destructive and productive effects of wind.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
OUTCOMES Examine the destructive effects of wind and river erosion. Create ways of limiting the impacts of coastal erosion.	1. Wind Erosion i) Definition ii) Processes: Attrition. iii) Erosion Features: Deflation Hallows, Rock Pedestals, Zeugens, Yardans, Mesas, Buttes, Ventifacts, and Dreikanters 2. Wind Deposition i) Depositional Features: Dunes, Barchan, Seifs, and Loess. ii) Features produced by water in desert regions.	Organize field trips to observe the impacts of wave erosion along the beaches of Liberia. Discuss, in groups, ways of controlling erosion by wind.	MATERIALS / RESOURCES A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 1 Map reading for west Africa Certificate Physical and Human Geography C. Other Resources/Suppleme	Essential tasks students should be able to do: 1. Define wind erosion and describe its processes. 2. Describe the depositional features of wind. 3. Analyze the destructive and productive effects of wind. 4. Observation and written reports on wind erosion.
			ntary Readings • Globe	
			 Globe Football Flashlight	

	• Pictures of the solar	
	system	
	 Planetarium 	

PERIOD: V

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – AGENTS MODIFYING LANDFORMS

TOPIC: ACTIONS OF WAVES

SPECIFIC OBJECTIVES: Upon completion of this topic, students will be able to:

- 1. Define waves, and describe their characteristics.
- 2. State the types of coasts, and describe their distinguishing features.

OUTCOMES	CONTENTS		ACTIVITIES	MATERIALS /	EVALUATION
				RESOURCES	
Examine the destructive	1. Waves	1.	Organize field trips to observe the	A. Primary Text	Essential tasks
effects of wind and river	i) Definition		impacts of wave erosion along the	General Geography in	students should be
erosion.	ii) Characteristics		beaches of Liberia.	Diagrams (Pearson)	able to do:
	iii) Erosional Processes: Corrosion				1. Define waves, and
Create ways of limiting	Attrition, Hydraulic Actions	2.	Discuss, in groups, ways of	B. Secondary Texts	describe their
the impacts of coastal	Solvent actions		controlling erosion by wind.	Abegunde, et al.	characteristics.
erosion.	iv) Features produced by Wave			Senior Secondary	2. State the types of
	Erosion: Cliff, Wave cut platform,			Geography Bk. 1	coasts, and describe
	Caves, Geos, Arches, and Stacks.			Map reading for west	their distinguishing
	v) Features produced by wave			Africa	features.
	Deposition:Beach, spit, Bar,				3. Write a report on
	Tombolo, and mudflat.			Certificate Physical	the observed effects of
				and Human	wave erosion.
	2. Types of Coasts			Geography	
	i) Submerged Coasts: High type and				
	Lowland type.			C. Other	

ii) Emerge Coast: Highland type, and,	Resources/Suppleme
Coral coasts	ntary Readings
iii) Origin of Coral Reefs: Daly's	• Globe
theory and Darwin' theory.	• Football
iv) The Coastline of West Africa	• Flashlight
	• Pictures of the
	solar
	• system
	Planetarium

PERIOD: VI

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) - LAND AND WATER DISTRIBUTION

TOPIC: LAND DISTRIBUTION

GENERAL OBJECTIVES: Upon completion of this unit students will be able to:

- 1. Identify the effects of natural phenomena on the environment.
- 2. Discuss the effects of human activities on the environment.
- 3. Develop pragmatic solutions to limit the impact of human activities on the environment.

SPECIFIC OBJECTIVES: Upon the completion of the topic, students will be able to:

- 1. Give the ratio of land to water.
- 2. Determine how much land is suitable for agriculture.
- 3. Identify the various forms of water masses.
- 4. Explain the importance of land masses to man.
- 5. Explain the importance of water masses to man.
- 6. Explain the major environmental hazards occurring as a result of human activities.
- 7. Explain the major environmental hazards occurring as a result of natural phenomena.
- 8. Suggest pragmatic solutions to minimize the negative impacts of human and natural phenomena on the environment as a resource of great importance that must not be misused.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Appraise the wealth of the	1. THE CONTINENTS	1. Have students recall the	A. Primary Text	Essential tasks students should
continents and the oceans	i) Definition	names of the continents	General Geography in	be able to do:
to the world's economy.	ii) Location and size	and oceans.	Diagrams (Pearson)	1. Use the globe to identify the
	iii) Importance			continents and oceans.
Realize their importance,		2. Students should be guided	B. Secondary Texts	Give the ratio of land to water.
and how best to care for		to arrive at definitions of	Abegunde, et al. Senior	
them.	2. THE ISLANDS	continents, oceans, and	Secondary Geography	2. Determine how much land is
Recognize the need to	i) Definition	islands.	Bk. 1	suitable for agriculture.
manage and conserve the	ii) Types	3. Group discussion on the	Map reading for west	
forest, water and land as	iii) Importance	importance of the	Africa	3. Identify the various forms of
environmental resources		continents and oceans.		water masses.
that must not be misused.	3. VEGETATION RESOURCES		Certificate Physical and	
	i) Definition	4. Invite Maritime Bureau	Human Geography	4. Explain the importance of
	ii) Types of vegetation resources-	officials to lecture students		land masses to man.
	timber, wood leaves, barks, latex,	on Liberia's maritime	C. Other Resources/	
	fruits, etc	affairs.	Supplementary	5. Explain the importance of
	iii) Importance: food, medicine, fuel,		Readings	water masses to man.
	housing, furniture, game reserve,	5. Students should identify	• Globe	
	etc.	the vegetation resources of	 Football 	6. Explain the major
		the country. Teacher to	 Flashlight 	environmental hazards occurring
	4. MINERAL RESOURCES	provide fuller explanation.	• Pictures of the solar	as a result of human activities.
	i) Definition		• system	
	ii) Types of mineral resources:	6. Recap lesson on the	• Planetarium	7. Explain the major
	metallic-ferrous, alloys, mineral	mineral resources of	1 Iuneturani	environmental hazards occurring
	fuels, e.g. petroleum, uranium,	Liberia.		as a result of natural phenomena.
	Coal, etc.			
	iii) Importance of mineral resources:			8. Suggest pragmatic solutions
	power generation, gem stones,			to minimize the negative
	aircraft industry, construction, etc.			impacts of human and natural
				phenomena on the environment
	5. CASE STUDY			as a resource of great
	i) Mineral resources of Liberia, West			importance that must not be
	Africa and other parts of Africa.			misused

PERIOD: <u>VI</u>

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – LAND AND WATER DISTRIBUTION

TOPIC: WATER DISTRIBUTION

SPECIFIC OBJECTIVES: Upon completion of this unit students will be able to:

- 1. Identify the effects of natural phenomena on the environment.
- 2. Discuss the effects of human activities on the environment.
- 3. Identify pragmatic solutions to limit the impact of human activities on the environment.

OUTCOMES	CONTENTS		ACTIVITIES	MATERIALS /	EVALUATION
001001125	OSIVIZIVIS			RESOURCES	Z (
Appraise the wealth of the	1. The Oceans	1.	Have students recall the names of	A. Primary Text	Essential tasks
continents and the oceans	i) Definition		the Continents and Oceans	General Geography in	students should be
to the World's economy.	ii) Location and size			Diagrams (Pearson)	able to do:
	iii) Topography of the Oceans	2.	Group discussion on the		1. Use the globe to
Realize their importance,	iv) Importance		importance of the Continents and	B. Secondary Texts	identify the
and care for them.	2. Water Resources		Oceans.	Abegunde, et al.	continents and
	i) Rivers:			Senior Secondary	oceans.
Recognize the need to	ii) Definition	3.	Invite a Maritime Bureau Officials	Geography Bk. 1	
manage and conserve the	iii) Source,		to lecture students on Liberia's	Map reading for west	2. Identify the effects
forest, water and land as	iv) Major Rivers of the World		Maritime affairs	Africa	of natural
environmental resources	v) Importance				phenomena on the
that must not be misused.	vi) Problems and Solutions	4.	Burning of Sheets of Paper in the	Certificate Physical	environment.
			Classroom.	and Human	
	3. ria - Definition			Geography	3. Discuss the effects
	I. Lakes	5.	Spraying of insecticides on		of human activities
	i) Definition		selected plants and other	C. Other	on the
	ii) Major Lakes		organisms.	Resources/Suppleme	environment.
	iii) Importance			ntary Readings	
	iv) Problems and Solutions			• Globe	4. Propose some
	II. Spring Water and Wells			• Football	pragmatic

i) Definitionii) Importanceiii) problems and Solutionsiv) Case Study: Wells of Liberia.	 Flashlight Pictures of the solar system 	solutions to limit the impact of human activities on the
	Planetarium	environment.

PERIOD: <u>VI</u>

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – LAND AND WATER DISTRIBUTION

TOPIC: LAND AND WATER POLLUTION

SPECIFIC OBJECTIVES: Upon completion of this unit students will be able to:

- 1. Name the different kinds of pollution and briefly describe them.
- 2. State the effects of pollution on human activities.
- 3. Suggest ways by which to control pollution.
- **4.** Discuss land ecosystem.

OUTCOMES	CONTENTS		ACTIVITIES	MATERIALS /	EVALUATION
				RESOURCES	
Appraise the wealth of the	1. Land Pollution	1.	Have students recall the names of	A. Primary Text	Essential tasks
continents and the oceans	i) Definition		the continents and oceans	General Geography in	students should be
to the World's economy	ii) Sources of land pollution			Diagrams (Pearson)	able to do:
	iii) Effects of land pollution	2.	Group discussion on the		1. Name the different
Realize their importance,	iv) Prevention/Control		importance of the continents and	B. Secondary Texts	kinds of pollution
and care for them.			oceans.	Abegunde, et al.	and briefly
	2. Water Pollution			Senior Secondary	describe them.
Recognize the need to	i) Definition	3.	Invite a Maritime Bureau officials	Geography Bk. 1	2. State the effects of
manage and conserve the	ii) Sources of Water Pollution:		to lecture students on Liberia's	Map reading for west	pollution on
forest, water and land as	River contamination(used of		maritime affairs	Africa	human activities.
environmental resources	D.D.T and others),				3. Suggest ways by
that must not be misused.	industrial waste etc,	4.	Spraying of insecticides on	Certificate Physical	which to control
	iii) Effects of water pollution.		selected plants and other	and Human	pollution.
	iv) Prevention/Control		organisms.	Geography	4. Use the globe to
					identify the

	C. Other	continents and
3. Land Ecosystem	Resources/Suppleme	oceans of the
i) Meaning and components	ntary Readings	world
ii) Food chain	• Globe	
iii) Land reclamation	• Football	
iv) Nutrient Cycle	Flashlight	
v) Problem and Solution	Pictures of the	
	solar	
	• system	
	Planetarium	

PERIOD: VI

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – ENVIRONMENTAL BALANCE

TOPIC: SOILS

SPECIFIC OBJECTIVES: Upon completion of this unit students will be able to:

- 1. Name the different soil types, and describe their characteristics.
- 2. Discuss the factors involved in soil formation.
- 3. Identify and discuss the influences on soil fertility.
- 4. Critically discuss the importance of soil to human and animal life.

OUTCOMES	CONTENTS		ACTIVITIES	MATERIALS /	EVALUATION
				RESOURCES	
Appreciate the importance	1. Soil Types	1.	Have students recall the names of	A. Primary Text	Essential tasks
of soil to plant and animal	 Local and characteristics 		the continents and oceans	General Geography in	students should be
life.				Diagrams (Pearson)	able to do:
	2. Soil Formation	2.	Group discussion on the		1. Name the different
	i) Factors		importance of the continents and	B. Secondary Texts	soil types, and
	ii) Relief		oceans.	Abegunde, et al.	describe their
	iii) Time			Senior Secondary	characteristics.
	iv) Decomposition of organic	3.	Invite a Maritime Bureau Officials	Geography Bk. 1	2. Discuss the factors

				1
matter, etc.		to lecture students on Liberia's	Map reading for west	involved in soil
v) Processes of Soil formation		Maritime affairs	Africa	formation.
vi) Humidification				3. Identify and
vii) Mineralization	4.	Burning of Sheets of Paper in the	Certificate Physical	discuss the
viii) Leaching		Classroom.	and Human	influences on soil
ix) Eluviations			Geography	fertility.
x) Eluviations	5.	Spraying of insecticides on		4. Critically discuss
xi) Lateralization, etc		selected plants and other	C. Other	the importance of
3. Soil Fertility		organisms.	Resources/Suppleme	soil to human and
			ntary Readings	animal life.
4. Importance of Soil			• Globe	5. Use the globe to
i) Plant life			• Football	identify the
ii) Provision of Minerals			 Flashlight 	continents and
iii) Source of raw materials			• Pictures of the	oceans.
iv) Base for construction			solar	
v) Habitant for fauna and Flora			• system	
			Planetarium	

PERIOD: <u>VI</u>

GRADE: <u>10</u>

UNIT: GEOGRAPHY (PHYSICAL) – ENVIRONMENTAL INTERVENTION

TOPIC: ENVIRONMENTAL HAZARD

SPECIFIC OBJECTIVES: Upon completion of this unit students will be able to:

1. List and describe the different kinds of environmental hazards.

2. State ways in which to avoid or manage such hazards.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	# OF	EVALUATION
			RESOURCES	DAYS	
Demonstrate a greater	1. Meaning and Types of	Let students recall incidents of	A. Primary Text	- Four	Essential tasks
understanding of the	Environmental Hazard	environmental hazards locally and	General Geography in	days	students should be
causes and effects of	i) Types: Soil erosion, floods,	elsewhere that they know of.	Diagrams (Pearson)	per	able to do:

	defendation describes	<u> </u>	1	1	1 Tink on J J
environmental hazards,	deforestation, desertification,			week	1. List and describe
and the ways in which	drought, etc	Guide students to categorize these	B. Secondary Texts		the different
they could be avoided or		hazards.	Abegunde, et al.		kinds of
controlled.	2. Soil Erosion and Depletion		Senior Secondary		environmental
	i) Types of Soil erosion: Sheet, gully	Guide students to arrive at	Geography Bk. 1		hazards.
	ii) Effect of soil erosion and depletion:	acceptable definitions of the terms	Map reading for west		2. State ways in
	removal of top soil, reduction of	associated with environmental	Africa		which to avoid or
	food, loss of farmlands, etc	hazards.			manage such
	iii) Prevention/Control		Certificate Physical		hazards.
		Let students brainstorm the causes,	and Human		3. Engage in
	3. Drought	effects, and means of prevention of	Geography		measures to
	i) Meaning of Drought	the identified hazards.			control local
	ii) Causes of Drought		C. Other		environmental
	iii) Deforestation, global warming, etc	Teacher to provide a summary of	Resources/Suppleme		hazards.
	iv) Effects of Drought	the information related to the steps	ntary Readings		11424145
	4. Desertification	above.	• Globe		
	i) Meaning	40076.	• Football		
	ii) Causes:				
	iii) Deforestation, global warming,		• Flashlight		
	unsound farming practices, forest		• Pictures of the		
			solar		
	fire, etc		• system		
	iv) Effects: Loss of farmlands, Aridity,		 Planetarium 		
	change in pattern of agriculture, etc				
	vi) Prevention/Control				
	vii) Plant life				
	viii) Provision of Minerals				
	ix) Source of raw materials				
	x) Base for construction				
	xi) Habitant for fauna and Flora				
	5. Flooding				
	i) Meaning				
	ii) Causes:				
	iii) Precipitation				
	iv) Melting of ice, etc				
	v) Effects:				
	vi) Displacement of population, loss				

of life and property, etc		
vii) Prevention and control		

PERIOD: <u>I</u>

GRADE: <u>11</u>

UNIT: GEOGRAPHY (PHYSICAL) – ENVIRONMENTAL INTERVENTION

TOPIC: ENVIRONMENTAL HAZARD

SPECIFIC OBJECTIVES: Upon completion of this unit students will be able to:

UNIT / TOPIC: THE ATMOSPHERE: (Climatology and Human Geography)

GENERAL OBJECTIVES: Upon completion of the unit, students will be able to:

- 1. Interpret the world's natural phenomena persisting in the human environment in relation to atmospheric changes and patterns.
- 2. Relate geographical concepts and factors that influence human activities and climatic differences.
- 3. Analyze the role of climate to the economic development of a country.
- 4. Sustainably exploit atmospheric resources for national development.
- 5. Relate climatic change to various unsound human activities.

SPECIFIC OBJECTIVES: upon completion of the topic, students will be able to:

- 1. Define the term 'atmosphere'.
- 2. Describe and discuss the composition and layers of the atmosphere.
- 3. Analyze the importance of the atmosphere to man.
- 4. Account for the various ways of polluting the atmosphere by man.
- 5. Suggest ways of limiting the impact of air pollution.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/ RESOURCES	EVALUATION
Appraise the reliance of man on the atmosphere. Acknowledge the consequences of misusing it.	CONTENTS 1. The Atmosphere i) Definition ii) Composition iii) Layers: iv) Troposphere, v) Stratosphere, vi) Mesospheric, vii) Ionosphere, and Exosphere viii) Importance of the layers. 2. Greenhouse Effect i) Definition ii) Causes, iii) Industrial smoke, iv) Deforestation, v) Forest fires, Gas emissions, etc. vi) Effects: a) Climatic changes b) Global, warning,	1. Group discussion on the effects of smoky environment, especially on health. 2. Group discussion on air pollution. 3. Invite an expert on environmental pollution to give a lecture on air pollution and control.		Essential tasks students should be able to do: 1. Define the term 'atmosphere'. 2. Describe and discuss the composition and layers of the atmosphere. 3. Analyze the importance of the atmosphere to man. 4. Account for the various ways of polluting the atmosphere by man. 5. Suggest ways of limiting the impact of air pollution. 6. Draw a diagram of the atmosphere. 7. Identify the importance of each layer.
	etc.			

PERIOD: II

GRADE: <u>11</u>

UNIT: GEOGRAPHY (PHYSICAL) – ENVIRONMENTAL INTERVENTION

TOPIC: ATMOSPHERIC RESOURCES, AND AIR POLLUTION: (Climatology and Human Geography) – THE ATMOSPHERE OF LIBERIA

- 1. Identify and classify the different types of atmospheric resources,
- 2. State the importance of atmospheric resources.
- 3. Analyze the causes of air pollution.
- 4. Suggest ways of limiting the impact of air pollution.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/ RESOURCES	EVALUATION
Appraise the reliance of man on	1. Atmospheric Resources	1. Group discussion	A. Primary Text	Essential tasks students
the atmosphere.	i) Definition	on the effects of	General Geography in Diagrams	should be able to do:
	ii) Types of atmospheric resources	either smoky	(Pearson)	1. Identify and classify
Acknowledge the consequences	:	environment,		the different types of
of misusing it.	a) Solar energy,	especially on their	B. Secondary Texts	atmospheric resources,
	b) Wind,	health.	Abegunde, et al. Senior	2. State the importance of
	c) Biomass,		Secondary Geography Bk. 2	atmospheric resources.
	d) Atmospheric gases, etc.	2. Group discussion		3. Analyze the causes of
	iii) Importance:	on air pollution.	Map reading for west Africa	air pollution.
	a)Power supply			4. Suggest ways of
	b) Life sustenance	3. Invite an expert	Certificate Physical and Human	limiting the impact of
	c)Communication, transport,	on environmental	Geography	air pollution.
	etc.	pollution to give a		
	iv) Problems and Solutions	lecture on air	C. Other	
		pollution and	Resources/Supplementary	
	2. Air Pollution	control.	Readings	
	i) Definition and terms, e.g.		 Pictures of smoggy 	
	a) Pollutants,		environments in urban areas.	

	b) Ozone layer,		
	c) Global warning etc.		
.:.			
	Causes of air pollution		
111) Effects of air pollution:.		
	a) Global warning		
	b) Changes in the patterns		
	of climate		
	c) Melting of ice		
	d) Holes in Ozone Layer		
	e) Acid rain,		
	f) Flooding,		
	g) Drought,		
	h) Deterioration of		
	physical Man-made		
	structures,		
	i) Displacement of people,		
	etc.		
iv) Control of air pollution.		
	Case Study: Liberia's Industrial		
''	Plants (Cemenco Fishing		
	=		
	companies, Monrovia		
	Breweries, etc.).		

PERIOD: II

GRADE: <u>11</u>

UNIT: GEOGRAPHY (PHYSICAL) – ENVIRONMENTAL INTERVENTION

TOPIC: WATER AND CLIMATE: (Climatology and Human Geography)

GENERAL OBJECTIVES: Upon completion of the unit, students will be able to:

- 1. Observe weather and climatic elements and the way they change, using simple activities and experiments.
- 2. Understand and make use of daily and seasonal weather reports.

3. Account for the pattern of pattern of human activities as dictated by weather and climate.

- 1. Differentiate between weather and climate.
- 2. Describe the components of a weather station.
- 3. Discuss the factors that affect weather and climate.
- 4. Demonstrate how the elements of weather and climate are measured and recorded.
- 5. Distinguish between the Greek's classification and Koppen's classification of climates into regions.
- 6. Plot linear and bar graphs to represent temperature and rainfall distribution.
- 7. Analyze climatic statistical data.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/	EVALUATION
			RESOURCES	
Gain basic knowledge	1. Weather	1. Collect daily or	A. Primary Text	Essential tasks students should be able to
and skills to interpret	i) Definition.	monthly temperature	General Geography in	<u>do:</u>
weather records and	ii) Observing the weather,	and rainfall records	Diagrams (Pearson)	1. Differentiate between weather and climate.
relate them to the pattern	iii) The weather station,	from various		2. Describe the components of a weather
of human activities.		communities for	B. Secondary Texts	station.
Appraise climate as a	2. Climate	comparison.	Abegunde, et al. Senior	3. Discuss the factors that affect weather and
prime environmental	i) Definition	2. Group students and	Secondary Geography Bk.	climate.
resource for	ii) Factors affection weather	assign each to	2	4. Demonstrate how the elements of weather
development.	and climate	prepare a wind vane		and climate are measured and recorded.
	iii) Measuring and recording	or rain gauge.	Map reading for west	5. Distinguish between the Greek's
Analyze climatic data	the elements of weather	3. List some animal	Africa	classification and Koppen's classification
and graphs for	and climate	and plant species		of climates into regions.
investigative	iv) Classification of climates	associated with each	Certificate Physical and	6. Plot linear and bar graphs to represent
comparison.	a) Greek's	climatic or	Human Geography	temperature and rainfall distribution.
	classification	vegetation region.		7. Analyze climatic statistical data.
	b) Koppen's	4. Plot climatic graphs	C. Other	8. compare two given climatic types under the
	classification	for given data.	Resources/Supplementary	following headings:
	c) Advantages and	5. Solving given	Readings	• rainfall
	disadvantages	problems involving	 Pictures of smoggy 	 temperature
	v) Climatic regions	range, and mean	environments in urban	 natural vegetation
	a) Equatorial,	temperatures or total	areas.	 primary economic activities.
	b) Tropical,	rainfall.		9. Plot graphs from given climatic statistical
	c) Hot desert, and			data
	d) Mediterranean.			10. Group students to do the following:

		calculate mean annual rainfall, and
		annual range of temperatures.

PERIOD: II

GRADE: <u>11</u>

UNIT: EFFECT OF CLIMATIC ELEMENTS – (Climatology and Human Geography)

TOPIC: WEATHER AND CLIMATE

- 1. Define temperature.
- 2. State the effects of temperature on humans.
- 3. Identify and describe the types of rainfall.
- 4. Discuss each of the processes of rainfall.
- 5. Analyze climatic statistical data.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/ RESOURCES	EVALUATION
Gain basic knowledge and	1. Temperature	1. Collect daily or monthly	A. Primary Text	Essential tasks students
skills to interpret weather	i) Effects of temperature on human	temperature and rainfall	General Geography in	should be able to do:
records and relate them to	comfort:	records from various	Diagrams (Pearson)	1. Define temperature.
the pattern of human	a) shelter	communities for		2. State the effects of
activities.	b) food, and clothing	comparison.	B. Secondary Texts	temperature on humans.
			Abegunde, et al. Senior	3. Identify and describe the
Appraise climate as a	2. Rainfall	2. Group students and assign	Secondary Geography Bk. 2	types of rainfall.
prime environmental	i) Types:	each to prepare a wind		4. Discuss each of the
resource for development.	a) conventional	vane or rain gauge.	Map reading for west Africa	processes of rainfall.
analyze climatic data and	b) Relief			5. Analyze climatic statistical
grahps for investigative	c) frontal cyclonic.	3. List some animal and plant	Certificate Physical and Human	data.
comparison.	ii) Other forms of precipitation: dew,	species associated with	Geography	6. Compare two given
	hail, frost, etc.	each climatic or vegetation		climatic types under the
	iii) Processes	region.	C. Other	following headings:
	a) insulation,		Resources/Supplementary	 rainfall
	b) evaporation,	4. Plot climatic graphs for	Readings	• temperature

c) evapo-transpiration, d) water vapor formation, e) humidity, f) saturation, g) dew point, h) condensation, and i) cloud formation	given data. 5. Solving given problems involving range, and mean temperatures or total rainfall.	Pictures of smoggy environments in urban areas.	 natural vegetation primary economic activities. 7. Plot graphs from given climatic statistical data. 8. Group students to do the following: calculate mean annual rainfall, and annual range of temperatures.
---	--	--	---

PERIOD: <u>II</u>

GRADE: <u>11</u>

UNIT: WEATHER AND CLIMATE – (Climatology and Human Geography)

TOPIC: ATMOSPHERIC PRESSURE AND WIND

- 1. Define temperature.
- 2. State the effects of temperature on humans.
- 3. Identify and describe the types of rainfall.
- 4. Discuss each of the processes of rainfall.
- 5. Analyze climatic statistical data.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/ RESOURCES	EVALUATION
Gain basic knowledge and skills to interpret weather records and relate them to the pattern of human activities. Appraise climate as a prime environmental resource for development. Analyze climatic data and grahps for investigative comparison.	1. Atmospheric Pressure and Wind i) Temperature differences as a result of: a) Wind direction b) Wind speed c) Pressure belts d) Zones of convergence e) Zones of divergence i) Planetary wind system ii) Deflection of winds iii) Land and sea breezes iv) Warm and cool/ cold v) Currents, shape of coastline, etc.	 Collect daily or monthly temperature and rainfall records from various communities for comparison. Group students and assign each to prepare a wind vane or rain gauge. List some animal and plant species associated with each climatic or vegetation region. Plot climatic graphs for given data. Solving given problems involving range, and mean temperatures or total rainfall. 	A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 2 Map reading for west Africa Certificate Physical and Human Geography C. Other Resources/Supplementary Readings Pictures of smoggy environments in urban areas.	Essential tasks students should be able to do: 1. Define temperature. 2. State the effects of temperature on humans. 3. Identify and describe the types of rainfall. 4. Discuss each of the processes of rainfall. 5. Analyze climatic statistical data.

PERIOD: III

GRADE: <u>11</u>

UNIT: WEATHER AND CLIMATE – (Climatology and Human Geography)

TOPIC: PRESENTATION OF CLIMATIC DATA

SPECIFIC OBJECTIVES: upon completion of the topic, students will be able to:

1. Calculate temperature (range, annual, monthly, mean, etc.)

2. Plot temperature graphs and charts.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/ RESOURCES	EVALUATION
Gain basic knowledge and skills to interpret weather records and relate them to the pattern of human activities. Appraise climate as a prime environmental resource for development. Analyze climatic data and grahps for investigative comparison.	CONTENTS 1. Temperature: i) Range (annual, monthly, etc.) ii) Mean (annual, etc.) rainfall: iii) Total(annual) iv) Mean (monthly) v) Graphs a) linear b) combined c) bars vi) Charts a) pie b) proportional, etc.	1. Collect daily or monthly temperature and rainfall records from various communities for comparison. 2. Group students and assign each to prepare a wind vane or rain gauge. 3. List some animal and plant species associated with each climatic or vegetation region. 4. Plot climatic graphs for given data. 5. Solving given problems	A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 2 Map reading for west Africa Certificate Physical and Human Geography C. Other Resources/Supplementary Readings	Essential tasks students should be able to do: 1. Calculate temperature (range, annual, monthly, mean, etc.) 2. Plot temperature graphs and charts.
		5. Solving given problems involving range, and mean temperatures or total rainfall.	Pictures of smoggy environments in urban areas.	

PERIOD: IV

GRADE: <u>11</u>

UNIT: WEATHER AND CLIMATE – (Climatology and Human Geography)

TOPIC: NATURAL VEGETATION AND HUMAN ECONOMIC ATIVITIES

SPECIFIC OBJECTIVES: upon completion of the topic, students will be able to:

1. Define vegetation.

- List and describe the different types of natural vegetation.
 Analyze the factors that affect vegetation.
- 4. Describe the economic activities in Liberia that are related to the natural vegetation.

OUTCOMES	CONTENTS		ACTIVITIES	MATERIALS/	EVALUATION
				RESOURCES	
Gain basic knowledge and	1. Natural Vegetation	1.	Collect daily or monthly	A. Primary Text	Essential tasks students
skills to interpret weather	i) Definition		temperature and rainfall	General Geography in Diagrams	should be able to do:
records and relate them to the	ii) Types:		records from various	(Pearson)	1. Define vegetation.
pattern of human activities.	a) Tropical Rainforest,		communities for		2. List and describe the
	b) Temperate Forest,		comparison.	B. Secondary Texts	different types of natural
Appraise climate as a prime	c) Tropical Grassland,			Abegunde, et al. Senior	vegetation.
environmental resource for	d) Temperate Grassland,	2.	Group students and	Secondary Geography Bk. 2	3. Analyze the factors that
development.	e) Desert,		assign each to prepare a		affect vegetation.
	f) Mediterranean,		wind vane or rain gauge.	Map reading for west Africa	4. Describe the economic
Analyze climatic data and	g) Montana, etc.				activities in Liberia that
grahps for investigative	iii) Characteristics	3.	List some animal and	Certificate Physical and Human	are related to the
comparison.	iv) Factors affecting the		plant species associated	Geography	vegetation.
	development of vegetation:		with each climatic or		
	a) Climatic,		vegetation region.	C. Other	
	b) Biotic,			Resources/Supplementary	
	c) Soil, etc.	4.	Plot climatic graphs for	Readings	
			given data.	Pictures of smoggy	
	2. Economic Human			environments in urban areas.	
	Activities	5.	Solving given problems		

a) Primaryb) Secondaryc) Problems And Solutions	involving range, and mean temperatures or total rainfall.	
4. Case Study: Liberia (Forest, Mountain, Savanna, Mangrove Swamps and Marshlands).		

PERIOD: IV

GRADE: <u>11</u>

UNIT: POPULATION

TOPIC: WORLD POPULATION AND SETTLEMENT

GENERAL OBJECTIVES: upon completion of the unit, students will be able to:

- 1. Interpret the interrelations between population and settlement patterns.
- 2. Discuss the pattern of world population.
- 3. Identify reasons for the rapid growth of world population.
- 4. Highlight world population problems and solutions.

- 1. Define the concept of world population.
- 2. Identify densely and sparsely populated regions of the world.
- 3. Explain population distribution patterns of the world.
- 4. Distinguish between overpopulation and underpopulation.
- 5. Account for the merits and demerits of overpopulation and underpopulation.
- 6. Explain the factors which influence population movements.
- 7. Explain why and how population census is conducted.
- 8. Identify the types of settlement, and settlement patterns.
- 9. Explain the consequences of migration at the source and receiving regions.
- 10. Define family planning and empowerment.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/	EVALUATION
			RESOURCES	
Create awareness of the	1. World Population	1. Guide students to	A. Primary Text	Essential tasks students
negative effects of rapid	i) Definition	draw maps	General Geography in	should be able to do:
population growth.	ii) Size and distribution.	indicating densely	Diagrams (Pearson)	1. Define the concept of
	iii) Factors affecting	and sparsely		world population.
Acknowledge the	population growth:	population	B. Secondary Texts	2. Identify densely and
significance of family	a) Improved health services	regions.	Abegunde, et al. Senior	sparsely populated
planning in decision making.	b) Industrial activities		Secondary Geography Bk.	regions of the world.
	c) Low mortality rate, etc.	2. Hold debates to	2	3. Explain population
Advocate for the protection		discuss the merits		distribution patterns of
and care for a world	2. Term Associated with Population:	and demerits of	Map reading for west	the world.
population explosion in	i) Overpopulation,	overpopulation,	Africa	4. Distinguish between
selected regions.	ii) Underpopulation,	and		overpopulation and
	iii) Optimum-population density,	underpopulation	Certificate Physical and	underpopulation.
Analyze related beliefs and	iv) Population census, etc.		Human Geography	5. Account for the merits
values regarding population		3. List some		and demerits of
that need reorientation.	3. Population Problems And	overpopulated and	C. Other	overpopulation and
	Solutions	underpopulated	Resources/Supplementary	underpopulation.
Discover the interaction	i) Migration:	countries.	Readings	6. Explain the factors which
between population growth	a) Definition		 Pictures of smoggy 	influence population
factors and settlement	b) Types	4. Invite an expert on	environments in urban	movements.
problems.	c) Effects and control	immigrants to	areas.	7. Explain why and how
		lecture on the		population census is
		challenges of		conducted.
		immigrants in		8. Role play the conduct of
		Liberia.		population census on
				students' campus.

PERIOD: IV

GRADE: <u>11</u>

UNIT: POPULATION

TOPIC: SETTLEMENT

- 1. Identify and describe the types of settlement, and settlement patterns.
- 2. Analyze the factors affecting settlement growth.
- 3. Explain the functions of settlements.
- 4. Explain the consequences of migration at the source and receiving regions.
- 5. Advance possible solutions to migration.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/ RESOURCES	EVALUATION
Create awareness of the negative effects of rapid population growth. Acknowledge the significance of family	 Types of Settlement Urban: Cities Towns Metropolis Satellite towns, etc. 	 Guide students to draw maps indicating densely and sparsely population regions. Hold debates to discuss 	A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior	Essential tasks students should be able to do: 1. Identify and describe the types of settlement, and settlement patterns. 2. Analyze the factors
planning in decision making. Advocate for the protection and care for a world	ii) Rural: a) Villages b) Cottages c) Farmstead, etc	the merits and demerits of overpopulation, and underpopulation.	Secondary Geography Bk. 2 Map reading for west Africa	affecting settlement growth. 3. Explain the functions of settlements.
population explosion in selected regions. Analyze related beliefs and	2. Factors Affecting Settlement Growth: a) Economic, b) Political,	 List some overpopulated and underpopulated countries. 	Certificate Physical and Human Geography C. Other	4. Explain the consequences of migration at the source and receiving regions.5. Advance possible
values that need reorientation.	c) Sociald) Physical topography, etc.	4. Invite an immigration expert to lecture on the challenges of	Resources/Supplementary Readings • Pictures of smoggy	solutions to migration.

Discover the interaction	3. Settlement Patterns:	immigrants in Liberia.	environments in urban areas.	
between population growth	a) Elongated or Ribbon or	_		
factors and settlement	Linear,			
problems.	b) Nucleated, dispersed			
	etc.			
	4. Settlement Functions:			
	a) Administrative.			
	b) Cultural / historical.			
	c) Industrial.			
	d) Mining.			
	e) Commercial.			
	f) Nodal, etc.			
	5. Case Study : Liberia			
	(Forms of Migration)			
	a) Rural-Urban,			
	b) Urban-Rural,			
	c) Urban-Urban			
	d) Rural-Rural			
	6. Reasons, Problems and			
	Control.			
	i) Human Resources in			
	Liberia (problems of			
	development and			
	solutions).			
	·			

PERIOD: IV

GRADE: <u>11</u>

UNIT: HUMAN GEOGRAPHY - THE WORK OF MAN

TOPIC: PRIMARY INDUTRIES

GENERAL OBJECTIVES: Upon completion of the unit, students will be able to:

- 1. Relate economic development to the growth of primary industries.
- 2. Exploit resources for sound primary industrial development.
- 3. Analyze the interrelationship between infrastructural development and standard of living through the development and growth of primary industry.

- 1. Define primary industries.
- 2. Identify factors affecting the development of primary industries.
- 3. Explain the impact of primary industries on development.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/	EVALUATION
			RESOURCES	
Create awareness of the	1. Definition of Primary	1. Lead students to	A. Primary Text	Essential tasks students should
negative effects of rapid	Industries	identify major primary	General Geography in	be able to do:
population growth.	2. Major Primary	industries in Liberia.	Diagrams (Pearson)	 Define primary
	Industries			industries.
Acknowledge the significance	A. Agriculture:	2. Arrange field trips to	B. Secondary Texts	2. Identify factors affecting
of family planning in decision	i) Classification	sites of primary	Abegunde, et al. Senior	the development of
making.	a) Subsistence or	industries.	Secondary Geography Bk. 2	primary industries.
	Commercial			3. Explain the impact of
Advocate for the protection	b) Crop or Animal		Map reading for west Africa	primary industries on
and care for a world population	Farming	3. Create other relevant		development.
explosion in selected regions.	ii) Systems Of Farming:	activities, especially	Certificate Physical and	4. Discuss the impact of
	 a) Shifting cultivation 		Human Geography	primary industries on the

Analyze related beliefs and	b) Bush fallowing	health related.		health and living
values that need reorientation.	c) Mechanized farming		C. Other	standards of the people in
	d) Crop rotation Truck		Resources/Supplementary	their communities.
Discover the interaction	farming		Readings	
between population growth	e) Pastoralism,		• Pictures of smoggy	
factors and settlement	Vomadism, Dairy		environments in urban	
problems.	farming, etc.		areas.	
problems.	iii) Factors Affecting		arcus.	
	Agriculture.			
	a) Physical, (Soil,			
	Climate, Etcd)			
	b) Human,(Labor,			
	Tradition, Etc)			
	c) Economic, (Market,			
	d) Transportation, Etc)			
	e) Biotic - rodents, pests,			
	etc.			
	iv) Importance Of Agriculture			
	v) Problems:			
	a) Production,			
	b) Preservation,			
	c) Distribution			
	d) Rural depopulation,			
	etc.			
	vi) Solutions:			
	a) Incentives to farmers			
	b) Improved transport			
	system			
	c) Soil enrichment.			
	d) Water management			
	and development.			
	e) Storage facilities, etc			
	vii) Irrigation Farming:			
	a) Perennial irrigation			
	b) Basin irrigation			
	c) Tank irrigation			
	d) Well irrigation			
	u) wen irrigation			

viii) Reasons for Irrigation	
ix) Agricultural Produce -	
problems and solutions	
x) Fruit Farming: Types	
of fruit farming	
a) Viticulture	
b) Orchard farming	
c) Citrus farming, etc	
xi) Types of fruits and their	
importance	
xii) Conditions favoring fruit	
farming:	
a) Climate	
b) . Soils, etc	
' ' '	
xiii) Problems, current trends	
and solutions.	
xiv) Plantation Agriculture	
a) Definition	
b) Crops involved	
c) Requirements for their	
establishment.	
d) Importance	
e) Problems, current	
trends and solutions.	

PERIOD: <u>V</u>

GRADE: <u>11</u>

UNIT: HUMAN GEOGRAPHY - THE WORK OF MAN

TOPIC: PRIMARY INDUTRIES (COND.) - FISHING

- 1. Name and locate the major fishing grounds in Liberia and other parts of the world.
- 2. Describe the local and international methods of fishing.
- 3. State the conditions that favor fishing.
- 4. Discuss the importance of fishing.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/	EVALUATION
			RESOURCES	
Develop a better understanding	1. Fishing	1. Guide students to	A. Primary Text	Essential tasks students should
of the primary industrial	i) Major Fishing Grounds:	identify local fishing	General Geography in	be able to do:
activities of Liberia, especially	a) The Grand Banks	grounds.	Diagrams (Pearson)	1. Name and locate the major
fishing.	b) The coast of Peru			fishing grounds in Liberia and
	c) The Sea of Japan	2. Students to identify	B. Secondary Texts	other parts of the world.
	d) The coast of West Africa	and name local fish.	Abegunde, et al. Senior	2. Describe the local and
	e) The coast of Alaska, etc.		Secondary Geography Bk. 2	international methods of
	ii) Methods of Fishing:	3. Invite a fisherman to		fishing.
	a) Hook and line	describe methods of	Map reading for west Africa	3. State the conditions that favor
	b) The use of nets	fishing.		fishing.
	c) The use of wicker baskets,		Certificate Physical and	4. Discuss the importance of
	etc.	4. Display pictures of	Human Geography	fishing.
	iii) Conditions that Favor Fishing	fishing vessels, and let		
	a) Meeting of warm and cool	students brainstorm on	C. Other	
	ocean currents	the more modern	Resources/Supplementary	
	b) Abundance of plankton	methods of large scale	Readings	
	c) Indented coastline	fishing.	 Pictures of smoggy 	
	d) Tradition		environments in urban	

e) Improved trawling	5. Students should make	areas.	
systems, etc.	short note on the		
iv) Importance of Fishing	importance of fishing.		
a) Source of food			
b) Employment opportunities			
c) Medicine, etc.			
d) Problems and solutions			
e) Case study			
v) Fishing in west Africa			
vi) Fishing in the Grand Banks of			
USA and New Foundland			

PERIOD: <u>V</u>

GRADE: <u>11</u>

UNIT: HUMAN GEOGRAPHY - THE WORK OF MAN

TOPIC: PRIMARY INDUTRIES (COND.) - MINING

- 1. State what mining is.
- 2. Name and classify the different types of minerals.
- 3. Locate on a map of the world the major producing countries of the minerals identified.
- 4. Briefly describe the uses of each of the minerals identified.
- 5. Analyze the importance of mining to national economies, especially that of Liberia.
- 6. Discussing some of the problems facing the mining industry in Liberia and other West African states.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/ RESOURCES	EVALUATION
Develop a better	1. Mining	1. Use appropriate	A. Primary Text	Essential tasks students should be
understanding of the	i) Definition	charts/pictures to get	General Geography in Diagrams	able to do:
mining activities of Liberia.	ii) Types of Minerals:	students to group mineral	(Pearson)	1. State what mining is.
	a) Metallic (Ferrous and Non-	resources according to		2. Name and classify the different
	Ferrous)	types.	B. Secondary Texts	types of minerals.

	h) Non Motollia		Alagara da est al Carrian	2 I agata an a man of the r11
	b) Non-Metallic		Abegunde, et al. Senior	3. Locate on a map of the world
1.	c) Mineral Fuels	2. Draw pie charts for	Secondary Geography Bk. 2	the major producing countries
	iii) Uses of Selected Minerals:	major mineral producing		of the minerals identified.
	a) Iron Ore,	countries of world	Map reading for west Africa	4. Briefly describe the uses of
	b) Aluminum/Bauxite	mineral resources.		each of the minerals identified.
	c) Silica		Certificate Physical and Human	5. Analyze the importance of
	d) Gold	3. Students should	Geography	mining to national economies,
	e) Diamonds	brainstorm on the uses of		especially that of Liberia.
	f) Petroleum, etc.	the different mineral	C. Other	6. Discussing some of the
i	iv) Methods of Mining:	resources.	Resources/Supplementary	problems facing the mining
	a) Open Pit or Open Cast		Readings	industry in Liberia and other
	b) Adit	4. Explain the importance	Pictures of smoggy	West African states.
	c) Shaft or underground dredging	of the Mining Industry to	environments in urban areas.	
	d) Drilling	Liberia, and West Arica		
	v) Importance of the Mining Industry	generally, using		
	a) Provision of employment	appropriate examples		
	b) Provision of raw materials	and with the active		
	c) Income earning	participation of students.		
	d) Source of foreign exchange			
	e) Improved standard of living	Encourage students to		
	f) Construction,	develop their own lists of the		
	g) Infrastructural development,	problems they identify in the		
	etc.	Mining Industry.		
	vi) Problems and Solutions	industry.		
	vii) Case Studies:			
	a) Iron ore mining in Liberia			
	b) Gold mining in Ghana and			
	South Africa.			
	c) Oil mining in the Delta Region			
	of Nigeria.			
	d) Copper mining in the Katanga			
	Region of Congo DR			
	region of Congo Dr			

PERIOD: <u>V</u>

GRADE: <u>11</u>

UNIT: HUMAN GEOGRAPHY - THE WORK OF MAN

TOPIC: PRIMARY INDUTRIES (COND.) - LUMBERING

SPECIFIC OBJECTIVES: Upon completion of the topic, students will be able to:

1. State what lumbering is.

- 2. Name and classify the different methods of lumbering.
- 3. Name the choice trees in lumbering.
- 4. State and comment on the factors affecting lumbering in Liberia and elsewhere.
- 5. Discuss the importance of lumbering.
- 6. Propose solutions to the problems facing lumbering in Liberia

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/ RESOURCES	EVALUATION
Develop a better	Lumbering:	1. Guide students to arrive	A. Primary Text	Essential tasks students should be
understanding of the	i) Definition	at an acceptable	General Geography in	able to do:
primary industrial	ii) Methods of exploitation:	definition of lumbering.	Diagrams (Pearson)	Provide an acceptable definition
activities of Liberia,	a) Tropical forests	2. Display		of lumbering.
especially lumbering.	b) Temperate forests	pictures/illustrations of	B. Secondary Texts	2. Name and classify the different
	iii) Factors affecting lumbering:	lumbering activities, and	Abegunde, et al. Senior	methods of lumbering.
	a) Climate	ask students to describe	Secondary Geography Bk.	3. Name the choice trees in
	b) Soil	what they see.	2	lumbering.
	c) Biotic factors etc.	3. Provide information on	_	4. State and comment on the
	d) Relief	methods of exploitation	Map reading for west	factors affecting lumbering in
	iv) Types and species of plants	and factors affecting	Africa	Liberia and elsewhere.
	v) Importance Of Lumbering:	these.		5. Discuss the importance of
	a) Provision of jobs	4. With appropriate	Certificate Physical and	lumbering.
	b) Construction	illustrations, let students	Human Geography	6. Propose solutions to the
	c) Foreign exchange earner	identify the types and		problems facing lumbering in
	etc.	species of plants in	C. Other	Liberia.
	vi) Problems And Solutions	lumbering.	Resources/Supplementary	
	vii) Case Studies:	5. Organize a visit to a Saw	Readings	

 a) Lumbering in Liberia b) Lumbering in the Congo Basin of Central Africa. c) Lumbering in West Africa 	Mill for students to observe the activities, and write a report on the raw products they saw	Pictures of smoggy environments in urban areas.
,	and their processing.	

PERIOD: VI

GRADE: <u>11</u>

UNIT: HUMAN GEOGRAPHY - THE WORK OF MAN

TOPIC: SECONDARY INDUSTRIES

GENERAL OBJECTIVES: upon completion of these topics, students will be able to:

- 1. Differentiate between secondary industrial in the developing world from those of the developed world.
- 2. Analyze the factors that have caused the slow development of secondary industries in the developing world.
- 3. Discuss the role that fuel and power play in the development of manufacturing industries.

- 1. State the categories of secondary industries.
- 2. List the factors that affect the location of manufacturing industries.
- 3. Examine the impact of manufacturing industries on the health of communities.
- 4. Emphasize the role of secondary industries in industrial development.
- 5. Classify manufacturing industries and briefly describe each class.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/	EVALUATION
			RESOURCES	
Attain the concept of	1. Manufacturing:	1. Guide students to	A. Primary Text	Essential tasks students
industrial	i) Definition	engage in panel	General Geography in	should be able to do:
development	ii) Manufacturing Industries:	discussions on the	Diagrams (Pearson)	1. State the categories of
	Classification:	positive and		secondary industries.
	a) Light or heavy	negative impacts	B. Secondary Texts	2. List the factors that affect
	b) Cottage or factory	of manufacturing	Abegunde, et al. Senior	the location of
	iii) Major Industrial Regions.	industries.	Secondary Geography Bk.	manufacturing industries.
	iv) Factors affecting the location of		2	3. Examine the impact of

manufacturing industries:	2. Invite local		manufacturing industries
a) Availability of power	investors to give	Map reading for west	on the health of
b) Availability of raw materials	an insight into	Africa	communities.
c) Availability of capital	hazard assessment		4. Emphasize the role of
d) Availability of labor	policy of her/his	Certificate Physical and	secondary industries in
e) Government policy	organization.	Human Geography	industrial development.
f) Good transportation system			5. Classify manufacturing
g) Market avenues, etc.	3. Create other	C. Other	industries and briefly
v) Importance of Manufacturing	relevant activities,	Resources/Supplementary	describe each class.
Industries:	especially health	Readings	6. Class reports from the
a) Employment opportunities	related.	 Pictures of smoggy 	field.
b) Income earning		environments in urban	7. Assignment on waste
c) Source of food	Organize field trips	areas.	disposal by industries
d) Human resource development,	and excursions to		within the communities
e) Improved standard of living,	selected factory plants		where students live, and
f) .Improved technology for	in Liberia.		the effects of poor disposal
infrastructural development			systems on the health of
g) Improved transport, etc.			people in the communities.
vi) Problems Facing Manufacturing			
Industries:			
a) Capital			
b) Waste disposal			
c) Air pollution from industrial			
fumes			
d) Marketing, etc.			
vii) Case Studies:			
a) Factories in Liberia b) Manufacturing in Southwestern			
b) Manufacturing in Southwestern Nigeria (West Africa)			
c) Manufacturing in South Africa			
d) Industrial development In			
North-Eastern USA.			
North-Dastelli OSA.			
	1		

PERIOD: VI

GRADE: <u>11</u>

UNIT: HUMAN GEOGRAPHY - THE WORK OF MAN

TOPIC: SECONDARY INDUSTRIES

GENERAL OBJECTIVES: upon completion of these topics, students will be able to:

Identify and classify the different sources of energy.
 Name the forms of energy.

3. Analyze the factors affecting sources of energy.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS/ RESOURCES	EVALUATION
A 44 - : - 41	1 C	1 C: 1 1 1-		E4-14-d4-d4-d1-d-
Attain the concept of	1. Sources of Energy	1. Guide students to	A. Primary Text	Essential tasks students should be
industrial	i. Classification:	engage in panel	General Geography in	able to do:
development	a) .Renewable, and	discussions on the	Diagrams (Pearson)	1. Identify and classify the different
	b) .Non Renewable	positive and		sources of energy
	2. Forms of Energy :	negative impacts of	B. Secondary Texts	2. Name the forms of energy
	Mineral Fuels (Fossil Fuels):	manufacturing	Abegunde, et al. Senior	3. Analyze the factors affecting
	E.g. Coal, Natural Gas,	industries.	Secondary Geography Bk.	sources of energy.
	Petroleum and Uranium.		2	4. Write reports on fieldwork.
	3. Location and Distribution	2. Invite local		
	Power Sources:	investors to give an	Map reading for west	
	Eg. Hydro _ Electric Power _	insight into hazard	Africa	
	Rivers, Waterfalls, Dams Etc.	assessment policy		
	a) Solar – Sunlight	of his organization.	Certificate Physical and	
	b) Wind		Human Geography	
	c) Tidal	3. Create other		
	d) Geothermal	relevant activities,	C. Other	
	e) Underground	especially health	Resources/Supplementary	
	f) Biomass - Organic	related.	Readings	
	Organisms		Pictures of smoggy	
	4. Factors Affecting Sources	4. Organize field trips	environments in urban	

of Energy.	and excursions to	areas.	
a) Capital,	selected factory		
b) Technology,	plants in Liberia.		
c) Climate, Etc.	_		

PERIOD: I

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: KINDS OF MAPS AND THEIR USES

GENERAL OBJECTIVES: upon completion of these topics, students will be able to:

- 1. Read and interpret maps of various kinds in detail.
- 2. Explain map features, such as, scale, legend and contours to be able to interpret maps information.
- 3. Calculate land areas, visualize slopes and find directions and positions of places on maps
- 4. Interpret graphical representation of Statistical data
- 5. Demonstrate a full understanding of ordinance survey maps
- 6. Demonstrate in practice elementary surveying methods and field practices
- 7. Analyze Geographic information system and data using remote sensors

- 1. Read and explain map information
- 2. Distinguish and identify the various kinds of maps.
- 3. Use map scales to reduce, enlarge, and calculate areas and ground distances of maps.
- 4. Calculate the gradient of slopes.
- 5. Convert from one scale to another
- 6. Locate the positions of places using the grid system, or longitudes and latitudes.
- 7. Locate directions using the compass and bearing.
- 8. Demonstrate skills and techniques to prepare diagrams, profiles and sketches resulting from survey exercises.

OUTCOMES / OBJECTIVES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Grasp the concept of	1. Map – A Definition	1. Guide students to:	A. Primary Text	Essential tasks students should be
maps. Recognize the importance	2. Map Characteristics	a. Draw maps to scale.b. Reduce and enlarge maps and Scales.	General Geography in Diagrams (Pearson)	able to do: 1. Read and explain
of maps in traveling, especially for adventure or tourism.	3. Types of Maps: Road maps, Weather maps, Atlases, Topographical maps etc	c. Practice the uses of rulers, protractors and strings.	B. Secondary Texts Abegunde, et al. Senior Secondary	map information 2. Distinguish and identify the
Gain broader understanding of the use of maps. Give clear geographical directions. Recognize and appreciate the work of Cartographers.	 4. Importance/Uses of Maps: a) Give information b) Identify landscape c) Interpret landscape d) Find directions and positions e) Find distances, etc 5. Limitations of Maps 	 Invite an expert to talk to students on the importance and limitations of Maps. Determine Positions from map extracts. Determine bearings using the prismatic compass. 	Geography Bk. 3 Map reading for west Africa Certificate Physical and Human Geography Other Resources/Suppleme	various kinds of maps. Other essential evaluation tools: • Emphasize practical seatwork • Reports of visual observation of land forms • Exercises on
Appreciate the role of Surveyors in the community.			 ntary Readings Sample of Cartographic maps Extracts of Liberia Atlases. Geometric sets Pencil String, etc 	conversion of scales and linear scale construction

PERIOD: <u>I</u>

GRADE: 12

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: MAP SCALES

SPECIFIC OBJECTIVES:

- 1. Use map scales to reduce, enlarge, and calculate areas and ground distances of maps.
- 2. Calculate the gradient of slopes.
- 3. Convert from one scale to another
- 4. Locate the positions of places using the grid system, or longitudes and latitudes.
- 5. Locate directions using the compass and bearing.
- 6. Demonstrate skills and techniques to prepare diagrams, profiles and sketches resulting from survey exercises.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
1. Grasp the concept of	1. Definition of Map Scale	1. Guide students to:	A. Primary Text	Essential tasks students
maps.	2. Types of Map Scales:	a) Draw maps to scale.	General Geography in	should be able to do:
2. Recognize the	3. Statement Scale	b) Reduce and enlarge maps	Diagrams (Pearson)	• Emphasize practical
importance of maps in	4. Representative Fraction	and Scales.		seatwork
traveling, especially for	5. Linear Scale	c) Practice the uses of rulers,	B. Secondary Texts	• Reports of visual
adventure or tourism.	6. Advantages and Disadvantages of	protractors and strings.	Abegunde, et al. Senior	observation of land
3. Gain broader	each type of scale	2. Invite an expert to talk to	Secondary Geography Bk. 3	forms
understanding of the use	7. Characteristics of each type of Scale	students on the importance		• Exercises on conversion
of maps.	8. Conversion of Map Scales	and limitations of Maps.	Map reading for west Africa	of scales and linear
4. Give clear geographical	a) From Statement to R.F.	3. Determine Positions from map		scale construction -
directions.	b) From Statement to Linear	extracts.	Certificate Physical and	
5. Recognize and	c) From R.F. to Statement	4. Determine bearings using the	Human Geography	
appreciate the work of	d) From R.F. to Linear	prismatic compass.	<u>Other</u>	
Cartographers.	e) From Linear to Statement		Resources/Supplementary	
6. Appreciate the role of	f) From Linear to R.F.		Readings	

Surveyors in the	Sample of Cartographic
community.	maps
	Extracts of Liberia
	Atlases.
	Geometric sets
	Pencil
	String, etc

PERIOD: <u>I</u>

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: MEASUREMENT OF DISTANCES AND AREAS

SPECIFIC OBJECTIVES:

- 1. Use map scales to reduce, enlarge, and calculate areas and ground distances of maps.
- 2. Calculate the gradient of slopes.
- 3. Convert from one scale to another.
- 4. Accurately measure straight and curved distances.
- 5. Accurately measure regular and irregular shapes

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Grasp the concept of	1. Measurement of Straight Distances	1. Guide students to:	A. Primary Text	Essential tasks students
maps.		a) Draw maps to scale.	General Geography in	should be able to do:
	2. Measurement of Curved Distances	b) Reduce and enlarge maps and	Diagrams (Pearson)	1. Use map scales to
Recognize the importance		Scales.		reduce, enlarge, and
of maps in traveling,	3. Measurement of Regular Shapes	c) Practice the uses of rulers,	B. Secondary Texts	calculate areas and
especially for adventure or		protractors and strings.	Abegunde, et al. Senior	ground distances of
tourism.	4. Measurement of Irregular Shapes		Secondary Geography	maps.
		2. Invite an expert to talk to	Bk. 3	2. Calculate the gradient
Gain broader		students on the importance		of slopes.

understanding of the use	and limitations of Maps.	Map reading for west	3. Convert from one scale
of maps.		Africa	to another.
	3. Determine Positions from		4. Accurately measure
Give clear geographical	map extracts.	Certificate Physical and	straight and curved
directions.		Human Geography	distances.
	4. Determine bearings using the		5. Accurately measure
Recognize and appreciate	prismatic compass.	<u>Other</u>	regular and irregular
the work of Cartographers.		Resources/Supplement	shapes
		ary Readings	Other essential
Appreciate the role of		• Sample of	evaluation tools:
Surveyors in the		Cartographic maps	 Emphasize practical
community.		 Extracts of Liberia 	seatwork.
		Atlases.	• Reports of visual
		• Geometric sets	observation of land
		• Pencil	forms.
		• String, etc	

PERIOD: I

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: MAP REDUCTION AND ENLARGEMENT

SPECIFIC OBJECTIVES:

- 1. Correctly go through the steps of map reduction.
- 2. Correctly go through the steps of map enlargement.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Grasp the concept of	1. Map Reduction Steps:	1. Guide students to:	A. Primary Text	Essential tasks
maps.	(a) Measuring length and width	a) Draw maps to scale.	General Geography in	students should be
	(b) Multiplying each measurement by scale	b) Reduce and enlarge maps and	Diagrams (Pearson)	able to do:

Recognize the importance	factor of reduction	Scales.		1. Correctly go
of maps in traveling,	(c) Scale reduction(Calculation)	c) Practice the uses of rulers,	B. Secondary Texts	through the steps
especially for adventure or		protractors and strings.	Abegunde, et al.	of map reduction.
tourism.	2. Map Enlargement steps:		Senior Secondary	2. Correctly go
	(a) Measuring length and width	2. Invite an expert to talk to students on	Geography Bk. 3	through the steps
Gain broader	(b) Multiplying length and Width	the importance and limitations of		of map
understanding of the use	(c) Multiplying each measurement by the	Maps.	Map reading for west	enlargement.
of maps.	scale factor of enlargement		Africa	
	(d) Scale enlargement(Calculation)	3. Determine Positions from map extracts		Other essential
Give clear geographical	(e) Drawing of Outlines		Certificate Physical	evaluation tools:
directions.		4. Determine bearings using the	and Human	Emphasize practical
		prismatic compass.	Geography	seatwork.
Recognize and appreciate				Reports of visual
the work of Cartographers.			<u>Other</u>	
			Resources/Suppleme	
Appreciate the role of			ntary Readings	
Surveyors in the			• Sample of	
community.			Cartographic	
			maps	
			• Extracts of Liberia	
			Atlases.	
			 Geometric sets 	
			• Pencil	
			• String, etc	

PERIOD: <u>I</u>

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: POSITION AND DIRECTION

SPECIFIC OBJECTIVES:

Upon completion of this topic, students will be able to:

1. Locate positions using Latitudes.

2. Tell direction using the compass points and the Angular Bearings.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Grasp the concept of	1. Locate Position using Latitudes.	1. Guide students to:	A. Primary Text	Essential tasks
maps.		a) Draw maps to scale.	General Geography in	students should be
	2. Locate Position using Grid	b) Reduce and enlarge maps	Diagrams (Pearson)	able to do:
Recognize the importance	References	and Scales.		1. Locate positions
of maps in traveling,		c) Practice the uses of rulers,	B. Secondary Texts	using Latitudes.
especially for adventure or	3. Direction:	protractors and strings.	Abegunde, et al.	2. Tell direction
tourism.	a) Using the compass points.		Senior Secondary	using the compass
	b) Using the Angular Bearings	2. Invite an expert to talk to students on	Geography Bk. 3	points and the
Gain broader	c) Using the compass points and	the importance and limitations of		Angular Bearings.
understanding of the use	Bearings	Maps.	Map reading for west	
of maps.			Africa	Other essential
T. C.	4. Types of North:	3. Determine positions from map	J	evaluation tools:
Give clear geographical	a) Magnetic	extracts.	Certificate Physical	• Emphasize practical
directions.	b) True		and Human	seatwork.
	c) Grid	4. Determine bearings using the	Geography	• Reports of visual
Recognize and appreciate		prismatic compass.		exercises on
the work of Cartographers.		rr	<u>Other</u>	conversion of Scales
Appreciate the role of			Resources/Suppleme	and linear scale
Surveyors in the			ntary Readings	construction
community.			• Sample of	Construction
community.			Cartographic	
			maps	
			Extracts of Liberia	
			• Extracts of Liberia Atlases.	
			• Geometric sets	
			• Pencil	
			• String, etc	

PERIOD: <u>I</u>

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: CONVENTIONAL SIGNS

SPECIFIC OBJECTIVES:

- 1. Give a correct definition of *conventional signs and symbols*.
- 2. Identify and describe the types of signs and symbols.
- 3. State the importance and uses of conventional signs and symbols.
- 4. State the limitations of conventional signs and symbols.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Grasp the concept of	1. Definition of Conventional Signs and	1. Guide students to:	A. Primary Text	Essential tasks
maps.	Symbols.	- Draw maps to scale.	General Geography in	students should be
		- Reduce and enlarge maps and	Diagrams (Pearson)	able to do:
Recognize the importance	2. Types of Signs and Symbols:	Scales.		1. Give a correct
of maps in traveling,	a) Point symbols	- Practice the uses of rulers,	B. Secondary Texts	definition of
especially for adventure or	b) Line symbols	protractors and strings.	Abegunde, et al. Senior	conventional signs
tourism.	c) Literal symbols		Secondary Geography Bk.	and symbols.
	d) Pictorial symbols	2. Invite an expert to talk to students	3	2. Identify and
Gain broader	e) Color symbols	on the importance and limitations		describe the types
understanding of the use		of Maps.	Map reading for west	of signs and
of maps.	3. Importance and Uses of		Africa	symbols.
	Conventional Signs and Symbols.	3. Determine Positions from map		3. State the
Give clear geographical		extracts.	Certificate Physical and	importance and
directions.	4. Limitation in the Use of Signs and		Human Geography	uses of
	Symbols.	4. Determine bearings using the		conventional signs
Recognize and appreciate		prismatic compass.	Other Resources/	and symbols.
the work of Cartographers.			Supplementary Readings	4. State the
			Sample of	limitations of

Appreciate the role of		Cartographic maps	conventional signs
Surveyors in the		• Extracts of Liberia	and symbols.
community.		Atlases.	Other essential
		 Geometric sets 	evaluation tools:
		• Pencil	 Emphasize practical
		• String, etc	seatwork.
			• Reports of visual
			exercises on
			conversion of Scales
			and linear scale
			construction -

PERIOD: II

GRADE: 12

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: METHODS OF REPRESENTATING RELIEF

GENERAL OBJECTIVES: Upon completion of the topics in this unit, students will be able to:

- 1. Demonstrate full knowledge of relief features, and identify them.
- 2. Draw relief profiles of depressions, uplands or elevations and explain their existence.
- 3. Explain drainage, settlement and landforms in relation to human activities.
- 4. Relate communication to relief and settlement.
- 5. Explain the role of graphical representation as a geography tools.

- 1. Draw profiles to represents common contour landforms.
- 2. Examine the interaction of settlement patterns, communication and land use.
- 3. Distinguish the characteristics features of the different methods of showing relief on Maps.
- 4. Discuss the sources of statistical data.
- 5. Explain the advantages and disadvantages of the various kinds of graphs.
- 6. Discuss the advantages and disadvantages of the different methods of showing relief.
- 7. Calculate contour intervals, and use them to number the unnumbered contour.
- 8. Demonstrate how to draw cross- section; process and techniques.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	# OF	EVALUATION
			RESOURCES	DAYS	
Appreciate the work of	Relief Representing	1. Study map extracts and:	A. Primary Text	- Four	Essential tasks students
cartographers	a) Hachure	 Point out the nature of each 	General Geography in	days	should be able to do:
	b) Hill shading	landform.	Diagrams (Pearson)	per	1. Draw profiles to
	c) Layers coloring hinting.	 Draw cross- sections clearly. 		week	represent common
	d) Spot heights	•	B. Secondary Texts		landforms.
	e) Trigonometrically spots/	2. Represent statical data in	Abegunde, et al. Senior		2. Draw relief profiles of
	stations	geographical forms.	Secondary Geography Bk.		depressions, uplands or
	f) Simple, pictorial methods.		3		elevations and explain
	g) Limitations				their existence
			Map reading for west		
			Africa		Other essential evaluation
					tools:
			Certificate Physical and		Emphasize practical
			Human Geography		seatwork.
					Reports of visual
			<u>Other</u>		exercises on conversion of
			Resources/Supplementar		Scales and linear scale
			<u>y Readings</u>		construction -
			• Sample of		
			Cartographic maps		-
			• Extracts of Liberia		
			Atlases.		
			• Geometric sets		
			• Pencil		
			• String, etc		

PERIOD: II

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: SIMPLE CONTOUR LANDFORMS

SPECIFIC OBJECTIVES:

Upon completion of this topic, students will be able to:

1. Define contours.

2. Identify and describe the different contour landforms.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Appreciate the work of	1. Contours:	1. Study map extracts and:	A. Primary Text	Essential tasks
cartographers	i. Definition	 Point out the nature of 	General Geography in Diagrams	students should be
	ii. Contour	each landform.	(Pearson)	able to do:
	iii. Slope	Draw cross- sections		1. Define contours.
	a) Concave	clearly.	B. Secondary Texts	2. Identify and
	b) Convex	•	Abegunde, et al. Senior Secondary	describe the
	c) Steep,	2. Represent statically data in	Geography Bk. 3	different contour
	d) Gentle, etc	geographical forms.		landforms.
		geographiem rollins.	Map reading for west Africa	3. Draw cross
	2. Contour Landforms:			sections clearly.
	i. Plateau		Certificate Physical and Human	
	ii. Ridge		Geography	Other essential
	iii. Valley			evaluation tools:
	iv. Spur		Other Resources/Supplementary	Emphasize practical
	_		Readings	seatwork.
			Sample of Cartographic maps	• Reports of visual
			Extracts of Liberia	exercises on
			Atlases.	conversion of Scales

Geometric setsPencil	and linear scale construction
• String, etc	Exercise on map skills and techniques

PERIOD: II

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: CONTOUR LANDFORMS (Cond.)

SPECIFIC OBJECTIVES:

- Upon completion of this topic, students will be able to:
 1. Identify and describe the different contour landforms.
- 2. Define gradient.
- 3. Use the appropriate formula to calculate gradient.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Appreciate the work of	Contour Landforms (Cond.)	1. Study map extracts and:	A. Primary Text	Essential tasks
cartographers	i. Col/ Saddle	 Point out the nature of each 	General Geography in	students should be
	ii. Pass/ Gap	landform.	Diagrams (Pearson)	able to do:
	iii. Knoll,	 Draw cross- sections clearly. 		1. Identify and
	iv. Cuesta,	•	B. Secondary Texts	describe the
		2. Represent statically data in	Abegunde, et al. Senior	different contour
	Gradient	geographical forms.	Secondary Geography Bk. 3	landforms.
	i. Definition			2. Define gradient.
	ii. Calculation of Gradient		Map reading for west	3. Use the
	iii. Formula		Africa	appropriate
	iv. Vertical Exaggeration			formula to
	v. Cross sectional Drawing		Certificate Physical and	calculate gradient.
	vi. Framework,		Human Geography	
	vii. Alignment,			Other essential
	viii. Intervisibility, identification of		<u>Other</u>	evaluation tools:

terminal points, marking	Resources/Supplementary	Emphasize practical
intervening contours, vertical	<u>Readings</u>	seatwork.
scale, etc.	Sample of Cartographic	Reports of visual
	maps	exercises on
	Extracts of Liberia	conversion of Scales
	Atlases.	and linear scale
	Geometric sets	construction
	• Pencil	Exercise on map skills
	• String, etc	and techniques

PERIOD: II

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: DRINAGE AND RIVER BASINS SPECIFIC OBJECTIVES:

Upon completion of this topic, students will be able to:

1. Define drainage.

- 2. Identify and describe the drainage systems.
- 3. Describe the types of drainage patterns.
- 4. State the influence of drainage on settlement and communication.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Appreciate the work of	1. Definition of Drainage	1. Study map extracts and:	A. Primary Text	Essential tasks
cartographers		 Point out the nature of each 	General Geography in	students should be
	2. Drainage Systems	landform.	Diagrams (Pearson)	able to do:
	 Island drainage, 	 Draw cross- sections clearly. 		1. Define drainage.
	River capture, etc		B. Secondary Texts	2. Identify and
		2. Represent statically data in	Abegunde, et al.	describe the
	5. Types of Drainage Patterns	geographical forms.	Senior Secondary	drainage systems.
	• Dendrite		Geography Bk. 3	3. Describe the types
				of drainage

	 Trellis, Radial, etc River Profile Upper course Middle course, Lower course 	Map reading for west Africa Certificate Physical and Human Geography	patterns. 4. State the influence of drainage on settlement and communication. Other essential
7	6. Influence of Drainage on Settlement 7. Influence of Drainage on Communication	Other Resources/Suppleme ntary Readings Sample of Cartographic maps Extracts of Liberia Atlases. Geometric sets Pencil String, etc	evaluation tools: Emphasize practical seatwork. Reports of visual exercises on conversion of Scales and linear scale construction Exercise on map skills and techniques

PERIOD: <u>II</u>

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: SETTLEMENT

- 1. Define settlement.
- 2. Name the types of settlements.
- 3. State the factors that affect settlement location.
- 4. Describe the different settlement patterns
- 5. Analyze the functions of settlements.
- 6. Describe the influence of drainage, communication, and relief on settlement.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
Appreciate the work of cartographers	1. Definition 2. Types of Settlement	 Study map extracts and: Point out the nature of each landform. Draw cross- sections clearly. Represent statically data in geographical forms. 	RESOURCES A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 3 Map reading for west Africa Certificate Physical and Human Geography Other Resources/Supplement ary Readings Sample of Cartographic maps Extracts of Liberia Atlases. Geometric sets Pencil String, etc	Essential tasks students should be able to do: 1. Define settlement. 2. Name the types of settlements. 3. State the factors that affect settlement location. 4. Describe the different settlement patterns 5. Analyze the functions of settlements. 6. Describe the influence of drainage, communication, and relief on settlement. Other essential evaluation tools: Emphasize practical seatwork. Reports of visual exercises on conversion of Scales and linear scale construction Exercise on map skills and techniques Exercise on map skills and techniques - Reports on the importance and disadvantages of relief to human settlement and communication - Draw graphs to represent various data

PERIOD: II

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: GRAPHICAL REPRESENTATION OF STATISTICAL DATA

SPECIFIC OBJECTIVES: Upon completion of this topic, students will be able to:

1. Discuss the sources of statistical data.

2. Draw different kinds of graphs based on statistical data.

3. Explain the advantages and disadvantages of the various kinds of graphs.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Appreciate the work of	1. Sources of Statistical Data.	1. Study map extracts and:	A. Primary Text	Essential tasks
cartographers		 Point out the nature of each 	General Geography in	students should be
	2. The Use of Statistics and Diagrams.	landform.	Diagrams (Pearson)	able to do:
		 Draw cross- sections clearly. 		1. Discuss the
	3. Limitations of Statistics		B. Secondary Texts	sources of
		2. Represent statically data in	Abegunde, et al.	statistical data.
	4. Tabulation of Statistics	geographical forms.	Senior Secondary	2. Draw different
			Geography Bk. 3	kinds of graphs
	5. Graphical Representation of			based on statistical
	Statistics		Map reading for west	data.
	 Choice of scale 		Africa	3. Explain the
	 The use of squared- paper in 			advantages and
	representing statistical data		Certificate Physical	disadvantages of
			and Human	the various kinds
	Types of Diagrams:		Geography	of graphs.
	• Line graphs (simple line graph,		<u>Other</u>	
	combine line graph, and compound		Resources/Suppleme	Other essential

	 Advantages and Disadvantages Bar graphs (histograms, simple bar graph, divergent bar graphs, and percentage bar graphs). Circle graphs (pie charts, proportional pie charts, and proportional circles). Advantages and Disadvantages 		 ntary Readings Sample of Cartographic maps Extracts of Liberia Atlases. Geometric sets Pencil String, etc 	evaluation tools: Other essential evaluation tools: Emphasize practical seatwork. Reports of visual exercises on conversion of Scales and linear scale construction Exercise on map skills and techniques Exercise on map skills and techniques Reports on the importance and disadvantages of relief to human settlement and communication Draw graphs to represent various data
--	---	--	--	---

PERIOD: III

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: ELEMENTARY SURVEYING

GENERAL OBJECTIVES: Upon completion of the topics, students will be able to:

- 1. Demonstrate an understanding of the basics of elementary surveying.
- 2. Apply and use surveying instruments.
- 3. Explain the basic concept of Geographic information system.
- 4. Perform practical field survey exercises.
- 5. Discuss the importance of surveying and its application in real life situations.

- 1. Identify the instruments used by surveyors in surveying.
- 2. Demonstrate skills and techniques of survey on the field.
- 3. Prepare diagrams, profiles and sketches resulting from survey exercises.
- 4. Identify obstacles in ranging and chaining
- 5. State the components of Geographic information System (GIS).

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Appreciate the role of	1. Meaning of Land Survey.	1. Have students survey the school	A. Primary Text	Essential tasks
surveyors in the		compound, or play ground, and	General Geography in	students should be
community	2. Branches of Land Survey:	 Prepared a sketch draft of the 	Diagrams (Pearson)	able to do:
	 Topographic 	survey		1. Identify surveying
	 Engineering 	 Draw a map extract of the school 	B. Secondary Texts	instruments.
	Geodetic, etc	grounds	Abegunde, et al.	2. Demonstrate the
	3. Kinds of Land Survey:	2. Field data collection for analysis,	Senior Secondary	techniques of
	Chain survey	eg lines of rivers, points of wells,	Geography Bk. 3	survey on the field.
	Prismatic survey	farms, etc		3. Prepare diagrams,
	Aerial survey		Map reading for west	profiles and
	- Horiai bai voy		Africa	sketches resulting

Triangulation, etc		from survey
	Certificate Physical	exercise.
4. Equipment and Materials:	and Human	
 Field notebook, 	Geography	Other essential
• Arrows,		evaluation tools:
Tape rule	<u>Other</u>	Other essential
Ranging poles, etc	Resources/Suppleme	evaluation tools:
ranging polos, etc	ntary Readings	Regular assessment of
Importance of Land Surveying.	• Sample of	both theoretical and
importance of Land Surveying.	Cartographic	practical field exercise
	maps	-Reports on field work
	Extracts of Liberia	on the sources of GIS
	Atlases.	and the importance of
	Geometric sets	georeferencing.
	Pencil	
	• String, etc	

PERIOD: III

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: CHAIN SURVEYING

SPECIFIC OBJECTIVES: Upon completion of the topics, students will be able to:

1. Define Chain Survey.

2. Describe the instruments used in Chain Survey.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Appreciate the role of	1. Definition of Chain Survey	1. Have students survey the school	A. Primary Text	Essential tasks
surveyors in the		compound, or play ground, and	General Geography in	students should be
community	2. Description and uses of Chain	Prepared a sketch draft of the	Diagrams (Pearson)	able to do:
	Survey Equipment	survey		1. Define Chain

 Ranging poles Arrows Measuring tape Off-set, etc 	Draw a map extract of the school grounds 2. Field data collection for analysis, eg lines of rivers, points of wells, farms,	B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 3	Survey. 2. Describe the instruments used in Chain Survey.
	etc	Map reading for west Africa	Other essential evaluation tools: Other essential
		Certificate Physical and Human	evaluation tools: Regular assessment of
		Geography Other	both theoretical and practical field exercise -Reports on field work
		Resources/Suppleme ntary Readings	on the sources of GIS and the importance of
		• Sample of Cartographic maps	georeferencing.
		• Extracts of Liberia Atlases.	
		Geometric setsPencilString, etc	

PERIOD: III

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: FIELD WORK OF CHAIN SURVEYING

- 1. Demonstrate the skills and techniques involved in chain survey.
- 2. Describing the obstacles encountered in chain survey.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Appreciate the role of surveyors in the community	 Reconnaissance North Point Choice of Stations Measurement on sloping land Obstacles Obstructing Ranging and Chaining: Booking Plotting Sources of Errors, etc Advantages and disadvantages of chain surveying 	 Have students survey the school compound, or play ground, and Prepared a sketch draft of the survey Draw a map extract of the school grounds Field data collection for analysis, eg lines of rivers, points of wells, farms, etc 	A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 3 Map reading for west Africa Certificate Physical and Human Geography	Essential tasks students should be able to do: 1. Demonstrate the skills and techniques involved in chain survey. 2. Describing the obstacles encountered in chain survey.
			Other Resources/Suppleme ntary Readings Sample of Cartographic maps Extracts of Liberia Atlases. Geometric sets Pencil String, etc	Other essential evaluation tools: Other essential evaluation tools: • Regular assessment of both theoretical and practical field exercise. • Reports on field work on the sources of GIS and the importance of georeferencing.

PERIOD: III

GRADE: <u>12</u>

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: TRAVERSE OR COMPASS SURVEYING

SPECIFIC OBJECTIVES: Upon completion of the topic, students will be able to:

1. Define traverse or compass surveying.

2. Name and describe the types of traverse surveying.

3. Identify the equipment of traverse surveying and describe their uses.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Appreciate the role of	1. Definition	1. Have students survey the school	A. Primary Text	Essential tasks
surveyors in the		compound, or play ground, and	General Geography in	students should be
community	2. Types of Traverse surveying:	Prepared a sketch draft of the	Diagrams (Pearson)	able to do:
•	Closed traverse	survey		1. Define traverse or
	Open traverse	Draw a map extract of the school	B. Secondary Texts	compass
	-	grounds	Abegunde, et al.	surveying.
	3. Methods of Traverse surveying:	_	Senior Secondary	2. Name and describe
	Line	2. Field data collection for analysis, eg	Geography Bk. 3	the types of
	Chain	lines of rivers, points of wells, farms, etc		traverse surveying.
	Theodolite		Map reading for west	3. Identify the
	Compass, etc		Africa	equipment of
				traverse surveying
	4. Description and uses of Traverse		Certificate Physical	and describe their
	Equipment:		and Human	uses.
	 Prismatic compass 		Geography	Other essential
	 Ranging compass 			evaluation tools:
	 Field notebook, etc 		<u>Other</u>	Other essential
	,		Resources/Suppleme	evaluation tools:
			ntary Readings	• Regular
			• Sample of	assessment of both
			Cartographic	theoretical and

	maps	practical field
	 Extracts of Liberia 	exercise.
	Atlases.	
	 Geometric sets 	 Reports on field
	 Pencil 	work on the
	• String, etc	sources of GIS and
	-	the importance of
		georeferencing.

PERIOD: III

GRADE: 12

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: FIELD WORK ON USING A COMPASS TRAVERSE

SPECIFIC OBJECTIVES: Upon completion of the topic, students will be able to:

1. Demonstrate the skills and techniques involved in compass surveying.

2. List and discuss the possible errors of closing.

3. State the advantages and disadvantages of compass surveying.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Appreciate the role of	1. Plotting the Survey	1. Have students survey the	A. Primary Text	Essential tasks students
surveyors in the		school compound, or play	General Geography	should be able to do:
community	2. Error of Closure - Possible Reasons	ground, and	in Diagrams	1. Demonstrate the skills and
	for the Closing of Error.	 a. Prepared a sketch 	(Pearson)	techniques involved in
		draft of the survey		compass surveying.
	3. How to Avoid Closing of Error on	b. Draw a map extract	B. Secondary Texts	2. List and discuss the
	the Field	of the school	Abegunde, et al.	possible errors of closing.
		grounds	Senior Secondary	3. State the advantages and
	4. Adjusting the Closing		Geography Bk. 3	disadvantages of compass
		2. Field data collection for		surveying.
	5. Advantages and Disadvantages	analysis, eg lines of rivers,	Map reading for	Other essential evaluation
		points of wells, farms, etc	west Africa	tools:

			Other essential evaluation
	Ce	ertificate Physical	tools:
	and	nd Human	Regular assessment of both
	Ge	eography	theoretical and practical
			field exercise.
	Ot	ther	Reports on field work on
	Re	esources/Supplem	the sources of GIS and the
	ent	ntary Readings	importance of
	•	Sample of	georeferencing.
		Cartographic	
		maps	
	•	Extracts of	
		Liberia	
		Atlases.	
	•	Geometric sets	
	•	Pencil	
	•	String, etc	

PERIOD: III

GRADE: 12

UNIT: GEOGRAPHY (PRACTICAL AND REGIONAL)

TOPIC: BASIC CONCEPTS OF GIS

- 1. Give the definition of GIS.
- 2. Name the sources of geographical data.
- 3. State the importance of geographical data and the GIS.
- 4. Name the components of GIS.
- 5. Outline the procedure of GIS.
- 6. Explain the relationship between GIS and remote sensing.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Appreciate the role of surveyors in the community	Meaning of Geographic Information System. Geographic Data: Sources of GIS:-Maps, fields work, satellite images, etc Importance of Geographic Data and The GIS Components of GIS Hardware:	 Have students survey the school compound, or play ground, and Prepared a sketch draft of the survey Draw a map extract of the school grounds Field data collection for analysis, eg lines of rivers, points of wells, farms, etc 	A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 3 Map reading for west Africa Certificate Physical and Human Geography Other Resources/Suppleme ntary Readings Sample of Cartographic maps Extracts of Liberia Atlases. Geometric sets Pencil String, etc	Essential tasks students should be able to do: 1. Give the definition of GIS. 2. Name the sources of geographical data. 3. State the importance of geographical data and the GIS. 4. Name the components of GIS. 5. Outline the procedure of GIS. 6. Explain the relationship between GIS and remote sensing. Other essential evaluation tools: Other essential evaluation tools: • Regular assessment of both theoretical and practical field exercise. • Reports on field work on the sources of GIS and the importance of georeferencing.

• Surveying Problems with GIS Implementation:		
• Power		
 Personnel 		
 Capital (High cost of hardware and 		
software)		

PERIOD: <u>IV</u>

GRADE: 12

UNIT: REGIONAL GEOGRAPHY OF LIBERIA AND THE REST OF AFRICA

TOPIC: LOCATION, POSITION, SIZE AND RELIEF AND DRAINAGE

GENERAL OBJECTIVES: Upon completion of the topics in this unit, students will be able to:

- 1. Analyze the impact of climate and vegetation on human activities.
- 2. Examine the impact of urbanization in Liberia and Africa.
- 3. Discuss the contribution of the primary economy sector to Africa's economy.
- 4. Suggest measures to improve secondary and tertiary activities of Africa's economy at large.
- 5. Analyze the numerous problems facing the geographical regions of Africa.
- 6. Account for the inter-relationship between physical features and the pattern of human activities in Liberia.
- 7. Acknowledge the impact of natural and physical features on the life of the people of Liberia.
- 8. Analyze the importance of conserving land, water and atmospheric resources that must not be misused.

- 1. Identify the five geographical regions of Liberia and the rest of Africa
- 2. Account for the importance of physical features of Liberia and the other geographical regions of Africa.
- 3. Outline factors that influence climate and vegetation in the lives of the people of the continent.
- 4. Identify soil types and their uses.
- 5. Suggest preventive measures to limit the impact of unsound human practices that lead to soil erosion, degradation and depletion

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Acknowledge the impact of the natural physical features on the human activities of Liberians. Acquire positive attitude towards economic policies and protocols. Develop a new outlook on environmental resource usage.	1. Location, Position and Size of Liberia ii. Location in relation to the continent of Africa iii. Geographical position (latitude and longitudes) iv. Total Area of Liberia v. Outlying features vi. Political division of Liberia vii. Counties and their Administrative capitals 2. Relief of Liberia i. Geology	 Guide students to: Locate Liberia on the map of Africa/West Africa. Describe the relief of Liberia. Identify and describe the drainage system and lakes of Liberia. Organize, where possible, visits to relevant sites. 	A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 3 Map reading for west Africa Certificate Physical and Human Geography Other Resources/Suppleme ntary Readings Sample of Cartographic maps Extracts of Liberia Atlases. Geometric sets Pencil String, etc	Essential tasks students should be able to do: 1. Identify the five geographical regions of Liberia and the rest of Africa 2. Account for the importance of physical features of Liberia and the other geographical regions of Africa. 3. Outline factors that influence climate and vegetation in the lives of the people of the continent. Other essential evaluation tools: Other essential evaluation tools: • Emphasize research reporting and discussing skills in addition to regular continuous assessment. • Sketch the political maps of Liberia.

ii. Principal Rivers: - The Cavalla - St. John - St. Paul - Lofa River - Mano River, and - Cestos River iii. Characteristics of Liberia's rivers: - Drainage pattern - Regime of rivers iv. Importance of Rivers of Liberia: • Source of fish (food) • Recreation, • Employment, • Income generation • Provision of water for domestic and industrial use, etc. v. Limitations of Liberia's Rivers: • Seasonality	Liberia showing the rivers of Liberia
 Waste dumping, Chemical contamination, etc Lakes of Liberia i. Natural: - Lake Piso - Lake shepherd ii. Man-made: iii. Importance of Lakes of Liberia: - Fishing - Employment - Recreational - Tourist attraction, etc iv. Demerits of Lakes in Liberia 	

PERIOD: <u>IV</u>

GRADE: <u>12</u>

UNIT: REGIONAL GEOGRAPHY OF LIBERIA AND THE REST OF AFRICA

TOPIC: CLIMATE, NATURAL VEGETATION, SOILS, POPULATION AND SETTLEMENT

SPECIFIC OBJECTIVES: Upon completion of the topics, students will be able to:

1. Define climate and name the factors that affect it.

- 2. Describe the vegetation zones of Liberia, and account for the factors that affect vegetation.
- 3. Name the soil types of the country and analyze the causes of soil erosion.
- 4. Describe the settlement pattern of Liberia.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
Acknowledge the impact of the natural physical features on the human activities of Liberians.	 1. Climate of Liberia i. Factors affecting climate: Location Pressure belts 	Guide students to: 1. Analyze various factors affecting climate.	RESOURCES A. Primary Text General Geography in Diagrams (Pearson)	Essential tasks students should be able to do: 1. Define climate and
Acquire positive attitude towards economic policies and protocols. Develop a new outlook on environmental resource usage.	 Relief Direction/shape of coastline, etc. Rainfall and temperature distribution i. The climatic seasons: Wet Dry ii. Impact of climate on economic activities. 	 Identify the natural vegetation of the country, and locate them. Identify soil types, and locate them. Discuss settlement patterns and what determine them. 	B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 3 Map reading for west Africa Certificate Physical	name the factors that affect it. 2. Describe the vegetation zones of Liberia, and account for the factors that affect vegetation. 3. Name the soil
	 2. Natural Vegetation of Liberia i. Factors affecting vegetation: Climate Soils Relief etc 		and Human Geography Other Resources/Suppleme ntary Readings Sample of	types of the country and analyze the causes of soil erosion. 4. Describe the settlement pattern of Liberia.

· · · · · · · · · · · · · · · · · · ·	VI4-4:	1	Cantaga 1:	-
iii.	Vegetation zones:		Cartographic	04
	• Rainforest		maps	Other essential
	 Savanna, etc 		• Extracts of Liberia	evaluation tools:
iv.	Importance of vegetation:		Atlases.	Other essential
	 Source of timber 		 Geometric sets 	evaluation tools:
	 Source of fuel 		 Pencil 	
	(charcoal/wood)		• String, etc	Emphasize research
	 Habitat for wildlife, etc 		_	reporting and
	ŕ			discussing skills in
3. Se	oils of Liberia			addition to regular
i.	Soil types			continuous
	• Latosols			assessment.
	• Lithosols			
	Regosols, and			Let students sketch the
	Swamp soils			political maps of
;;	Formation of soils			Liberia.
11. iii.	Soil erosion:			
111.	Sheet erosion			Let students sketch
				and color the
	• Gully erosion, and			vegetation map of
	• Sea erosion			Liberia.
iv.	Causes of soil erosion:			
	 Shifting cultivation, 			Students should sketch
	 Bush fallowing 			the map of Liberia
	 Bush fires, 			showing the rivers of
	 Deforestation etc 			the country.
v.	Methods of soil conservation in			
	Liberia.			
4. Po	opulation and Settlement			
i.	Factors affecting population			
	distribution and density			
ii.	Age Distribution			
iii.	Sex distribution			
iv.	Occupational distribution			
V.	Population problems:			
	• Congestion			
	00150001			

Г			T
	 High rate of crimes 		
	 Pressure on social amenities 		
	of public use,		
	 Unemployment 		
	• Traffic jams, etc		
vi.	Human resources:		
	Development,		
	Current trend		
	• Problems, and		
	• Solution		
vii.	Migration:		
	 Types of migration; 		
	 Effect of migration 		
viii.	Urbanization and its associated		
	problems:		
	 Accommodation, 		
	 Development of Slums 		
	• Unemployment, etc		
ix.	Settlement Types:		
	• Rural		
	Urban		
	Factors affecting the location of		
X.			
:	settlement		
X1.	Settlement problems and solutions		

PERIOD: <u>V</u>

GRADE: <u>12</u>

UNIT: REGIONAL GEOGRAPHY OF LIBERIA AND THE REST OF AFRICA

TOPIC: PRIMARY INDUSTRIES OF LIBERIA

GENERAL OBJECTIVES: Upon completion of the topics in this unit, student will be able to:

- 1. Discuss the contribution of primary economic activities to the economy of Liberia.
- 2. Suggest solutions to minimize the problems that face the primary sector of the economy of Liberia.
- 3. Discuss the importance of the Secondary and Tertiary economic activities sectors of the economy of Liberia.

- 1. Identify the primary, secondary, and tertiary sectors of the economy of Liberia
- 2. Discuss the importance of each sector to the economic and infrastructural development of Liberia
- 3. Account for the problems hampering the growth and development of Liberia's economy.
- 4. Highlight measures to improve the primary, secondary and tertiary industries of Liberia.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Acquire positive attitude towards economic policies and protocols. Appreciate the role played by energy and power in the development of economic activities and resources. 1. Acknowledge the importance or resource conservation	 i. Definition ii. Classification: Subsistence, or Commercial Crop, or Animal iii. System and characteristics: Plantation, Bush fallowing Shifting cultivation, Crop rotation, Truck farming, Pastoral farming, Poultry, etc iv. Factors affecting Agriculture v. The role of Agriculture in economic development vi. Problems and solutions 2. Case Study: Rubber plantation in Liberia (Firestone Operations) Current trend and prospects. 	 Teacher should guide students to analyze various economic activities Write reports on the strengths and weaknesses of the various industrial sectors in Liberia. Organize field trips to industrial plants and observe their waste disposal methods. Invite an expert on investment processes and prospect to give a talk to students on the topic. Create relevant activities 	A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 3 Map reading for west Africa Certificate Physical and Human Geography Other Resources/Suppleme ntary Readings Sample of Cartographic maps Extracts of Liberia Atlases. Geometric sets	Essential tasks students should be able to do: 1. Identify the primary, secondary, and tertiary sectors of the economy of Liberia 2. Discuss the importance of each sector to the economic and infrastructural development of Liberia 3. Account for the problems hampering the growth and development of Liberia's economy. 4. Highlight measures to

3. Lumi i. ii. iii. iii. iv.	Definition Areas noted for Lumbering Methods of exploitation Main economic trees: Ekki, Ironwood Niangon Mahogany Broum	PencilString, etc	improve the primary, secondary and tertiary industries of Liberia. Other essential evaluation tools: Other essential evaluation tools: • Research and
vi. vii. viii.	 Wawa Azobe, etc Economic importance Provision of employment Source of fuel Source of government's revenue Source of foreign exchange, etc Problems Solution Prospects 		 Draw a sketch map of Liberia and explain its economic development patterns
4. Fishing i. ii. iii. iii. iv.	Definition Types of Fishing Fresh-water fishing Salt-water fishing-on-shore and off-shore Major fishing areas Methods of fishing Hook and Line Wicker baskets, Net and trawlers Traps, etc		

I	TT' 1 C C' 1 1	T	
v.	Kinds of fish caught		
vi.	Fish preservation:		
	• Salting,		
	 Smoking 		
	 Freezing, etc 		
vii.	Importance:		
	 Source of income, 		
	 Provision of Jobs, 		
	 Source of food, etc 		
viii.	Problems and solutions		
ix.	Current trend and Prospects.		
5. Mini	ng and Mineral Resources:		
i.	Definition		
ii.	Types of Mineral Resources:		
	 Metallic-gold, iron ore, 		
	diamonds, etc		
	 Non-metallic 		
	 Ferrous-iron ore 		
iii.	Methods of Mining		
	 Open-pit or Open-cast, 		
	• Adit		
	• Dredging, etc		
iv.	Importance of Mining:		
	• Income generation,		
	• Foreign exchange,		
	 Improved living standards, 		
	etc		
v.	Uses of Minerals:		
	 Iron-ore-steel, 		
	Bauxite-aluminum,		
	 Diamonds-gem/jewelry, 		
	Gold- jewelry, etc		
vi.	Problems, Solutions and		
V1.	prospects		
	prospects		
L			l

6	6. Case Study: Iron ore mining in		
	Liberia.		

PERIOD: <u>V</u>

GRADE: <u>12</u>

UNIT: REGIONAL GEOGRAPHY OF LIBERIA AND THE REST OF AFRICA

TOPIC: TERTIARY INDUSTRIES OF LIBERIA

- 1. Identify the primary, secondary, and tertiary sectors of the economy of Liberia
- 2. Discuss the importance of each sector to the economic and infrastructural development of Liberia
- 3. Account for the problems hampering the growth and development of Liberia's economy.
- 4. Highlight measures to improve the primary, secondary and tertiary industries of Liberia.

OUTCOMES	CONTENTS			ACTIVITIES	MATERIALS /	EVALUATION
					RESOURCES	
Acquire positive attitude	1. Trade and Commerce		1.	Teacher should guide students to	A. Primary Text	Essential tasks
towards economic policies	 Definition and types 			analyze various economic activities	General Geography in	students should be
and protocols.	Internal, and				Diagrams (Pearson)	able to do:
	External		2.	Write reports on the strengths and		 Identify the
Appreciate the role played	ii. Direction of trade			weaknesses of the various industrial	B. Secondary Texts	primary,
by energy and power in	iii. Composition of trade			sectors in Liberia.	Abegunde, et al.	secondary, and
the development of	iv. Organization of trade				Senior Secondary	tertiary sectors
economic activities and	v. Retail and wholesale:		3.	Organize field trips to industrial plants	Geography Bk. 3	of the economy
resources.	Advantages and			and observe their waste disposal		of Liberia
	disadvantages/limitations			methods.	Map reading for west	2. Discuss the
Acknowledge the	vi. Role of internal trade				Africa	importance of
importance or resource	vii. Role of external trade to the		4.	Invite an expert on investment		each sector to
conservation	economic development of Liberi	a		processes and prospect to give a talk	Certificate Physical	the economic
	viii. Problems of trade and solutions.			to students on the topic.	and Human	and
	CASE STUDY: Liberia's curren	t	5.	Create relevant activities	Geography	infrastructural
	International trade status					development
	ix. ECOWAS & MRU (Highlights)				<u>Other</u>	of Liberia
	 Member countries 				Resources/Suppleme	3. Account for

		1 11
 Purpose/mandate Advantages and disadvantages Problems and Solutions (ECOWAS & MRU) Transport and Development: Definition Means of Transport Land Sea (water), and Air Forms of Land transport: Road Rail, Footpaths 	ntary Readings Sample of Cartographic maps Extracts of Liberia Atlases. Geometric sets Pencil String, etc	the problems hampering the growth and development of Liberia's economy. 4. Highlight measures to improve the primary, secondary and tertiary industries of Liberia. Other essential evaluation tools:
	Extracts of Liberia	of Liberia's
 i. Definition ii. Means of Transport Land Sea (water), and Air iii. Forms of Land transport: Road Rail, 	Geometric setsPencil	4. Highlight measures to improve the primary, secondary and tertiary industries of Liberia. Other essential
	1	1

3. Tourism:		
i. Definition		
ii. Major Tourist Attraction centers:		
Sarpo National Park		
Blue Lake		
• Lake piso		
National Museum		
iii. Importance of tourism to the		
Economic development of Liberia:		
iv. Problems and solutions		

PERIOD: VI

GRADE: <u>12</u>

UNIT: THE GEOGRAPHY OF WEST AFRICA

TOPIC: THE GENERAL GEOGRAPHY OF WEST AFRICA

GENERAL OBJECTIVES: Upon completion of the topics, students will be able to:

- 1. Divide Africa into regions and discuss the impact of the natural and physical features of the continent.
- 2. Analyze factors which influence the climatic variations, and how these affect human- economic activities.
- 3. Discuss the impact of mineral resources on the economy of each region.
- 4. Explain factors which affect population movements and their attendant problems in each regions.
- 5. Relate conditions on the continent to the geography of each region in Africa.
- 6. Analyze the role of Economic groupings inn Africa eg. AU; SADEC; ECOWAS, etc.

SPECIFIC OBJECTIVES: At the end of this topic, students should be able to:

- 1. Describe the natural and physical features of the region.
- 2. Examine the mineral and agricultural potential of the region compared to others,
- 3. Examine the industrial activities of the region compare to the others,
- 4. Discuss farming, mining, and trade patterns of the region.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Gain broader	1. The Geography of West Africa:	Encourage students to:	A. Primary Text	Essential tasks students
understanding about	 Countries 	 Write essays and reports 	General Geography in	should be able to do:
conditions in other parts of	Liberia, Nigeria, Ghana, Sierra	on of the economic life of	Diagrams (Pearson)	1. Describe the natural and
Africa.	Leone, Gambia, Senegal, Guinea,	the region		physical features of the
	Guinea Bissau, Capeverde, Benin,		B. Secondary Texts	region.
Recognized the need for	Togo, Ivory Coast, Burkina Faso,	2. Compare the industrial	Abegunde, et al.	2. Examine the mineral and
regional cooperation	Niger, Mali, Mauritania	farming and other	Senior Secondary	agricultural potential of the
	• Elements to highlight in discussion:	activities with those of	Geography Bk. 3	region compared to others,
	 Political boundaries 	other regions		3. Examine the industrial
	 Physical features 	3. Draw the political and	Map reading for west	activities of the region
	 Natural resources 	economic map of West	Africa	compare to the others,

Trade and communication	Africa	Certificate Physical	4. Discuss farming, mining, and trade patterns of the
Climate and conditionsAgriculture	4. Invite Embassy staff to	and Human	region.
Economic development	talk to students on their	Geography	5. Explain how the economic
	respective countries	Other	geography of West Africa is similar to that of each
		Resources/Suppleme	country of the region.
		ntary Readings	Oth
		• Sample of Cartographic	Other essential evaluation tools:
		maps	Other essential evaluation
		• Extracts of Liberia	tools:
		Atlases.	Class participation
		 Geometric sets 	Discussions and report
		• Pencil	writing in addition to
		• String, etc	continuous evaluation

PERIOD: VI

GRADE: <u>12</u>

UNIT: THE GEOGRAPHY OF AFRICA

TOPIC: GEOGRAPHY OF EAST AFRICA

SPECIFIC OBJECTIVES: At the end of this topic, students should be able to:

1. Draw the map of East Africa

2. Explain the climatic conditions of East Africa,

3. Describe the population density and patterns of each country in East Africa

4. Explain the main economic activities including export and import.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Appreciate the region as a	1. General Geography of East Africa:	Guide students to:	A. Primary Text	Essential tasks students
part of the African	 Countries 	1. Draw the map of the	General Geography in	should be able to do:

continent.	Kenya, Uganda, Tanzania, Malawi,	region	Diagrams (Pearson)	1. Draw the map of East
	Rwanda, Burundi, Zambia			Africa
Take proper steps to	 Discuss these elements 	2. Write reports of various	B. Secondary Texts	2. Explain the climatic
address issues that relate	 Political boundaries 	aspects of East Africa	Abegunde, et al. Senior	conditions of East Africa,
to population density and	 Physical features 		Secondary Geography	3. Describe the population
economic activities.	 Natural resources 	3. Create other relevant	Bk. 3	density and patterns of
	 Trade and communication 	activities		each country in East Africa
	 Population 		Map reading for west	4. Explain the main economic
	• Climate		Africa	activities including export
	Agriculture			and import.
	rigiteditate		Certificate Physical and	Other essential evaluation
			Human Geography	tools:
				Other essential evaluation
			<u>Other</u>	tools:
			Resources/Supplement	
			ary Readings	Report writing in
			• Sample of	addition to continuous
			Cartographic maps	evaluation
			• Extracts of Liberia	With the economic map
			Atlases.	of East Africa, explain
			• Geometric sets	the economic
			• Pencil	importance of the
			• String, etc	region.

PERIOD: <u>VI</u>

GRADE: <u>12</u>

UNIT: THE GEOGRAPHY OF AFRICA

TOPIC: GEOGRAPHY OF EQUATORIAL AND CENTRAL AFRICA

SPECIFIC OBJECTIVES: At the end of this topic, students should be able to:

- 1. Analyze the climate condition of Equatorial and Central Africa,
- Compare the population of each country
 Explain settlement patterns
- 4. Describe the major physical features.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Students will appreciate people of other regions in Africa	 Geography of Equatorial and Central Africa Countries Gabon, Congo Republic, Democratic Republic of Congo, Cameroon, Chad, Central African Republic Highlight these in discussion; Political boundaries Physical features Natural resources Trade and communication Population Climate 	 Draw the map of Central/ Equatorial Africa. Illustrate notable features of the region Discuss the economic viability of the region Create other relevant activities. 	A. Primary Text General Geography in Diagrams (Pearson) B. Secondary Texts Abegunde, et al. Senior Secondary Geography Bk. 3 Map reading for west Africa Certificate Physical and Human Geography Other Resources/Suppleme ntary Readings Sample of	Essential tasks students should be able to do: 1. Analyze the climate condition of Equatorial and Central Africa, 2. Compare the population of each country 3. Explain settlement patterns 4. Describe the major physical features. Other essential evaluation tools: Other essential evaluation tools: • Comparing the maps of Equatorial and Central Africa. • Explain the economic importance to the rest of Africa.

	Cartographic	
	maps	
	 Extracts of Liberia 	
	Atlases.	
	 Geometric sets 	
	 Pencil 	
	• String, etc	

PERIOD: VI

GRADE: 12

UNIT: THE GEOGRAPHY OF AFRICA

TOPIC: GEOGRAPHY OF NORTH AFRICA

SPECIFIC OBJECTIVES: At the end of this topic, students should be able to:

- 1. Describe the natural and physical features and climate of North Africa.
- 2. Explain settlement patterns in each country of the region
- 3. Compare the mineral and agriculture potential to other regions of Africa4. Analyze factors influencing population movements in the region.

OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS /	EVALUATION
			RESOURCES	
Develop the desire to	1. The geography of North Africa:	Guide students to:	A. Primary Text	Essential tasks
research into the	 Countries 	1. Draw the map of North Africa and	General Geography in	students should be
geography of other	 Libya, Algeria, Tunisia, Egypt, 	locate each country in the region,	Diagrams (Pearson)	able to do:
nations.	Morocco, Sahara Republic,			1. Describe the
	• Elements to highlight in	2. Write reports and hold discussions	B. Secondary Texts	natural and
	discussions,	and debates on the potential of the	Abegunde, et al.	physical features
	Political boundaries	resources of the region as compare	Senior Secondary	and climate of
	Physical features	to others	Geography Bk. 3	North Africa.
	Natural resources			2. Explain settlement
	Trade and communication	3. Discuss the role of long distance	Map reading for west	patterns in each
	Trace and communication	truck drivers in the spread of	Africa	country of the

Population	HIV/AIDS		region
• Climate		Certificate Physical	3. Compare the
Agriculture		and Human	mineral and
Economic development		Geography	agriculture
Leonomie de velopment			potential to other
		Other	regions of Africa
		Resources/Suppleme	4. Analyze factors
		ntary Readings	influencing
		• Sample of	population
		Cartographic	movements in the
		maps	5. Evaluate the role
		• Extracts of Liberia	of Africa unity in
		Atlases.	the development of
		 Geometric sets 	Africa
		Pencil	6. State how Africa
		• String, etc	can settle its own
		8,	social political and
			economic
			problems.

PERIOD: VI

GRADE: 12

UNIT: THE GEOGRAPHY OF AFRICA

TOPIC: GEOGRAPHY OF SOUTHERN AFRICA

SPECIFIC OBJECTIVES: At the end of this topic, students should be able to:

1. Outline and explain factors influencing climate,

Describe physical and natural features of the region,
 Compare and contrast factors influencing population with other regions,

4. Discuss the mineral and agricultural potential of the region.

Recognize the potential of other regions and people. 1. The Geography of Southern Africa • Countries Zimbabwe, Botswana, Lesotho, Sudan, Angola, Mauritius, Mozambique, Madagascar • Highlight these discussions: • Political boundaries • Natural resources • Trade and communication • Population • Climate • Agriculture • SADEC 1. Draw map profile of Southern Africa 2. Use the maps to discuss various aspects of the region 3. Create other relevant activities 2. Use the maps to discuss various aspects of the region 4. Create other relevant activities 5. Create other relevant activities 6. Countries 7. Doutine and explain factors influencing climate, activities 6. Certificate Physical and Human Geography 7. Compare and contrast factors influencing population with other regions, able to do: 7. Outline and explain factors influencing climate, activities 8. Secondary Texts 6. Certificate Physical and Human Geography 8. Certificate Physical and Human Geography 9. Compare and contrast factors influencing population with other regions, activities 1. Draw map profile of Southern Africa 9. Secondary Texts 9. Describe physical and natural features of the region, activities 1. Outline and explain factors influencing Certificate Physical and Human Geography 1. Outline and explain factors influencing Certificate Physical and Human Geography 1. Outline and explain factors influencing Resources/Supplementary Readings 9. Relief maps of Liberia and West Africa 1. Doutline and explain factors influencing Resources/Supplementary Readings 9. Relief maps of Liberia and West Africa 1. Doutline and explain factors influencing Resources/Supplementary Readings 9. Relief maps of Liberia and West Africa 1. Doutline and explain factors 1. Doutline and explai	OUTCOMES	CONTENTS	ACTIVITIES	MATERIALS / RESOURCES	EVALUATION
Photographs/illustrations of agricultural		 Africa Countries Zimbabwe, Botswana, Lesotho, Sudan, Angola, Mauritius, Mozambique, Madagascar Highlight these discussions: Political boundaries Physical features Natural resources Trade and communication Population Climate Agriculture 	 Draw map profile of Southern Africa Use the maps to discuss various aspects of the region Create other relevant 	Primary Text Abegunde, et al. Senior Secondary Geography Bk. 1 B. Secondary Texts General Geography in Diagrams (Pearson) Map reading for west Africa Certificate Physical and Human Geography Other Resources/Supplementary Readings Relief maps of Liberia and	students should be able to do: 1. Outline and explain factors influencing climate, 2. Describe physical and natural features of the region, 3. Compare and contrast factors influencing population with other regions, 4. Discuss the mineral and

	different physical features of Liberia and West Africa Map showing the location of tertiary industries in Liberia and West Africa. Samples of products of tertiary industries. Map of Liberia's industries Current investment statistics Political and Economic maps of West Africa Political and Economic maps of East Africa Atlas for senior secondary schools Map of Africa Economic/Political map of Central Africa Atlas for senior secondary schools Globe General Geography in Diagram for West Africa - Pearson	potential of the region. Other essential evaluation tools: Other essential evaluation tools: • Base evaluation on practical and analytical skills • Sketch the map of Southern Africa. State the economic contributions to the development of the continent.
--	--	--

