

The New Senior Secondary Curriculum for Sierra Leone

Subject syllabus for Geography

Subject Discipline: Social and Cultural Studies



This subject syllabus is based on the National Curriculum Framework for Senior Secondary Education. It was prepared by national curriculum specialists and subject experts.





Curriculum elements for Geography – a core subject

Subject description

The Senior Secondary School (SSS) Geography curriculum provides essential competencies in understanding and interpreting issues affecting man in his natural and built-up environment. This syllabus gives pupils basic geographical skills and techniques that enable them to be conscious about protecting the environment and solving and managing environmental problems. The cross cutting contemporary issues of the subject also arouse the curiosity and interest of pupils to analyse relationships between the bio-physical processes and human activities, thus developing their critical thinking and decision-making capabilities.

Rationale for the inclusion of Geography in the Senior Secondary School Curriculum

- a) Geography is an important subject in the senior secondary school curriculum in that it enables pupils to study the physical and human environment and the interdependence between them.
- b) Geography promotes knowledge and understanding of the world at the local, national and global scales and learning about the interconnected nature of our world.
- c) Studying Geography enables pupils to develop their awareness of the need for the sustainable use of our resources.
- d) Geography enables pupils to develop an appreciation of the nature, value, limitations and importance of different approaches to analysis and explanation.
- e) In studying Geography, learners are exposed to the social and physical realities of the world they live in. Pupils develop not only environmental ethics, but also understanding of various geographical principles and concepts influencing the spatial distribution of phenomena on the Earth's surface.
- f) Pupils develop awareness of the relevance of geography to understanding and solving contemporary environmental problems.
- g) Pupils develop practical skills to enhance geographical knowledge.

General learning outcomes and broad goals

By the end of this course, pupils will:

- Have developed a sense of space, place, and relative location
- Have demonstrated that they understand geomorphic, atmospheric, and biotic processes
- Show general understanding of contemporary issues on the complexity of environmental systems
- Have acquired and used appropriate cartographic skills and techniques used for map reading and interpretation



- Show they understand the importance of scale and can use it in studying geography
- Have demonstrated knowledge of (and ability to use and apply) appropriate skills and techniques, including fieldwork
- Show they are aware of the availability of geospatial technology that can be used for spatial analysis
- Practise accuracy and objectivity in collecting, recording, processing, presenting, analysing and interpreting geographical data
- Have demonstrated they appreciate the forces affecting spatial development and distribution of human population
- Have gained and demonstrated knowledge of human settlements in terms of types, functions and growth patterns
- Be able to explain types of population migration and the factors that influence migration and its impacts
- Show awareness and understanding of factors influencing patterns and changes in economic activity
- Be able to explain the causes and effects of change over space and time on physical and human environments
- Have demonstrated an ability to interpret and evaluate various sources and types of information
- Have developed and used a logical approach in order to present a structured, coherent and evidence-based argument
- Show they understand the impacts of human activity on environments and how these impacts can be managed sustainably
- Demonstrate knowledge and understanding of the geography of Sierra Leone and of Africa
- Show an understanding of contemporary social, economic and environmental issues in Sierra Leone, Africa, and the world
- Have developed and used geographical skills to address the socio-economic and environmental challenges that threaten sustainable development in Sierra Leone and Africa.

Subject content outline (Themes and topics to be covered)

A range of themes is suggested for the following key components of the syllabus:

- Elements of physical geography
- Economic and human geography
- Geography of Africa
- Maps, map reading and interpretation
- Geography of Sierra Leone

The topics to be covered are outlined below.



Structure of the syllabus over the three-year Senior Secondary School cycle

	SSS 1	SSS 2	SSS 3
Term 1	<p>Elements of physical geography</p> <p>Introduction</p> <ul style="list-style-type: none"> • Definition of Geography • Importance of Geography • Branches of Geography <p>Our planet in space</p> <ul style="list-style-type: none"> • The universe and solar system • Latitudes and longitudes • Movements of the Earth and effects • Planet Earth (shape, structure, surface) <p>Landforms – movement and types</p> <ul style="list-style-type: none"> • Plate tectonics: nature, types, processes and related landforms (ocean ridges, volcanic island arcs, ocean trench) • Mountains, karsts, plains and coastal landforms (formation, characteristics and importance) • Earthquakes: formation, prediction, impacts, hazard mapping, monitoring and preparedness • Volcanoes: formation, prediction, impacts, hazard mapping, monitoring and preparedness 	<p>Economic and human geography</p> <p>World population trends</p> <ul style="list-style-type: none"> • Population growth and distribution • Factors influencing population growth (topography, climate, soil, natural resources) • Impacts of population growth (hunger, economic effects, destruction of the environment, competition for resources) <p>Human settlements</p> <ul style="list-style-type: none"> • Definition and types of settlements (rural and urban) • Function of settlements • Settlement patterns • Factors affecting the location of settlements <p>Human migration</p> <ul style="list-style-type: none"> • Types of migration: voluntary migration, forced migration, seasonal migration, internal migration (rural – urban, urban – rural), external / international migration (immigration, emigration) • People who migrate (immigrants, emigrants, refugees) • Reasons for migration: push and pull factors • Impacts of migration 	<p>Maps, map-reading and interpretation</p> <p>Maps</p> <ul style="list-style-type: none"> • The meaning, types and elements of a map • Map reading and interpretation based on contoured survey maps of parts of West Africa • Map scale: types and scale conversion • Measuring distances and areas on a map • Direction and bearing • Map reduction and enlargement • Contour maps and landforms • Identifying physical features such as spurs, valleys, and cultural features, settlements, categories of roads and other communication routes • Measurement of gradients, drawing of profiles/cross sections, intervisibility between points on a map • Drainage characteristics • Communication patterns • Settlement and land use patterns <p>Aerial photography / satellite image interpretation</p> <ul style="list-style-type: none"> • Definition • History of aerial photography • Vertical and oblique aerial photographs • Panchromatic (black and white) and coloured images • Elements of aerial photograph interpretation



<p>Term 2</p> <p>Rocks and soil</p> <p><i>Rocks</i></p> <ul style="list-style-type: none"> • Types, formation, and uses <p><i>Weathering</i></p> <ul style="list-style-type: none"> • Types, factors affecting types and rate <p><i>Mass movement</i></p> <ul style="list-style-type: none"> • Soil creep, mudslide, rockfall • Factors affecting mass movement and control measures <p><i>Soil</i></p> <ul style="list-style-type: none"> • Factors and processes of soil formation • Soil profile • Main soil types and characteristics • Importance to humans • The effects of human activities on soil • Soil erosion and conservation. <p>Vegetation</p> <ul style="list-style-type: none"> • Main types, characteristics and distribution • Deforestation and its impacts on the environment • Conservation of vegetation resources <p>Deserts</p> <ul style="list-style-type: none"> • Main characteristics, landforms, physical processes, environmental problems and conservation measures 	<p>Transportation</p> <ul style="list-style-type: none"> • Modes (roads, railways, water, air, pipeline,) • Transportation and economic development • Problems of transportation and their solutions. <p>The tourism industry</p> <ul style="list-style-type: none"> • Meaning • Centres • Purposes (leisure, recreation, education,) • Importance of tourism • Eco-tourism • Problems and solutions <p>Sustainable development</p> <ul style="list-style-type: none"> • Definition • The important pillars of sustainable development • Sustainable development versus economic development 	<p>Statistical maps and diagrams, and surveying</p> <ul style="list-style-type: none"> • Bar graphs, Line graphs, flow charts, dot maps, proportional circles, density maps, isopleth maps <p><i>Principles of elementary surveying</i></p> <ul style="list-style-type: none"> • Definitions of terms • Instruments, chain and prismatic compass • Plotting of traverse • Avoiding obstacles in the field <p>Geographic Information Systems (GIS)</p> <ul style="list-style-type: none"> • Basic concepts of GIS • Components of GIS • Sources of geographical data • Uses of GIS • Limitations of GIS <p>Geography of Sierra Leone</p> <p>Regional geography of Sierra Leone</p> <ul style="list-style-type: none"> • Location, size neighbours and administrative divisions • Physical features, climate and vegetation • Population and ethnicity • Migration patterns (rural-urban, urban-rural, voluntary, forced) • Urbanisation
---	---	---



<p>Term 3</p>	<p>Climate and weather</p> <ul style="list-style-type: none"> • Elements of climate and instruments – rainfall, temperature, humidity, air pressure, wind • Factors affecting the elements of climate – land and sea breeze, latitude, altitude, continentality • Thunder and lightning • Classification of climate • Climate related hazards- tornadoes, hurricanes, tsunami • Climate change – factors influencing climate change, impacts and measures. <p>Hydrosphere</p> <ul style="list-style-type: none"> • The hydrological cycle • Oceans, lakes, rivers, • Groundwater and surface water: supply and control • Tides, waves, ocean currents • Conservation of water resources <p>The environment</p> <ul style="list-style-type: none"> • Definition, classification (biotic and abiotic) • Environmental Resources (renewable and non-renewable) • Types (minerals, water, vegetation, renewable and non-renewable energy sources) • Importance of each resource 	<p>Geography of Africa</p> <p>Location and physical environment</p> <ul style="list-style-type: none"> • Location, position, size , political divisions • Physical regions of Africa • Relief and drainage • Climate, vegetation, and ecology • Natural Resources <p>Population dynamics</p> <ul style="list-style-type: none"> • Population distribution and density • Migration – rural-urban, brain drain • Urbanisation and its impacts on African economies • Social issues; inequality, tribal, religious and regional conflict <p>Economic activities and the environment</p> <ul style="list-style-type: none"> • Agriculture • Mining • Manufacturing industries <p>Transport and trade</p> <ul style="list-style-type: none"> • Land, air and sea transport • Regional integration in Africa • Power (energy) production and development in Africa: Hydro-electric, solar energy <p>The changing African landscape</p> <ul style="list-style-type: none"> • Desertification • Deforestation • Natural disasters 	<p>Economic activities</p> <p><i>Primary economic activities</i></p> <ul style="list-style-type: none"> • Agriculture: subsistence and cash crop farming; livestock, problems and solutions • Fishing: inland and ocean, fishing methods, storage and marketing, problems and solutions • Mining: types, distribution of minerals, methods of extraction, problems and solutions • Lumbering: meaning of lumbering, sources of timber, methods of exploitation, types of species (for internal use and for export), problems and solutions, conservation <p><i>Transport and communication</i></p> <ul style="list-style-type: none"> • Problems and Solutions <p><i>Trade</i></p> <ul style="list-style-type: none"> • Internal and external trade <p><i>Manufacturing industries</i></p> <ul style="list-style-type: none"> • Location of industry, types of industries, • Problems of manufacturing industry • Energy and power: water, fuelwood and charcoal, biogas (e.g. cow-dung), hydro-electric power projects (e.g. Dodo, Guma, Bumbuna), solar energy
----------------------	---	---	--





<p>Environmental hazards and problems</p> <ul style="list-style-type: none">• Desertification, flooding, pollution, drought• Causes, impacts and measure of each hazard• Environmental management		
--	--	--





Teaching Syllabus

Senior Secondary Level 1

Topic/Theme/Unit	Expected learning outcomes	Recommended teaching methods	Suggested resources	Assessment of learning outcomes
Introduction <ul style="list-style-type: none"> • Definition of geography • Importance of geography • Branches of geography 	By the end of this topic, pupils will be able to: <ul style="list-style-type: none"> • Define geography • Argue the importance of Geography • Name and summarise the branches of geography 	<ul style="list-style-type: none"> • Introduce the lesson with a short discussion on pupils' knowledge and expectations. • Pupils write briefly: What they already know about geography, what they expect to learn while studying the subject and why they are studying it • Brainstorming session (e.g., 'What comes to your mind when you hear about geography?' 'Why do you think geography is important as a subject?') • List and explain the branches of geography • Summarise key points in the lesson for pupils to copy. 	<ul style="list-style-type: none"> • Lesson plan manual and pupil handbook 	<ul style="list-style-type: none"> • Short answer questions
Our planet in space <ul style="list-style-type: none"> • The universe and solar system • Movements of the Earth and effects 	By the end of this topic, pupils will be able to: <ul style="list-style-type: none"> • Define and explain the difference between the terms: universe, galaxy and solar system 	<ul style="list-style-type: none"> • Take pupils from known to unknown by asking pupils their understanding about the universe and the solar system, e.g. What are the universe, galaxy and solar system? What is the 	<ul style="list-style-type: none"> • Lesson plan manual and pupil handbook • Solar System 101 from National Geographic channel 	<ul style="list-style-type: none"> • Group presentation on the Solar System through role play, showcasing the planets and





<ul style="list-style-type: none"> Planet Earth: shape, structure, and surface Latitudes and longitudes 	<ul style="list-style-type: none"> Name the planets in the solar system and state some basic characteristics of each Draw and read lines of longitude and latitude and describe how we calculate time based on longitude and latitude Illustrate with available three-dimensional objects the rotation and revolution of the Earth and their effects Explain that the Earth is spherical and describe proofs that show that our planet is round and not flat Explain the basic features of the internal and external structure of the Earth 	<p>difference between the universe and a galaxy? What is the difference between the universe and the solar system? List the planets of the solar system. Why is Pluto not considered as a planet or part of the planets in the solar system? What do you understand by the rotation and revolution of the Earth?</p> <ul style="list-style-type: none"> Illustrate with diagrams and three-dimensional models showing the solar system, lines of latitude and longitude, the inner structure of the Earth (inner core, outer core, mantle and crust), the outer structure of the Earth (continents, oceans), the North and South Poles and Equator, the Tropics of Capricorn and of Cancer and the Arctic and Antarctic Circles Ask pupils: What are lines of longitude and latitude? 	<p>https://education.nationalgeographic.org/resource/space-101-solar-system/</p> <ul style="list-style-type: none"> Other videos on YouTube Flash cards 	<p>their characteristics</p> <ul style="list-style-type: none"> Class quiz competition Presentation of posters explaining the Earth's movement, structure and curvature
<p>Landforms – movement and types</p> <ul style="list-style-type: none"> Plate tectonics: nature, types, processes and related landforms (ocean ridges, 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> Show understanding of the continental drift theory 	<ul style="list-style-type: none"> Introduce the topic with a short video about plate tectonics from YouTube, then ask pupils what they have learnt from the video 	<ul style="list-style-type: none"> Global maps of major plate tectonics, earthquakes and volcanoes BBC Geography video on Plate Tectonics 	<ul style="list-style-type: none"> Short answer questions, e.g., What are plate tectonics?





<p>volcanic island arcs, ocean trench)</p> <ul style="list-style-type: none"> Mountains, karsts, plains and coastal landforms (formation, characteristics and importance) Earthquakes: formation, prediction, impacts, hazard mapping, monitoring and preparedness Volcanoes: formation, prediction, impacts, hazard mapping, monitoring and preparedness 	<ul style="list-style-type: none"> Explain the process and types of plate tectonics Outline the major plate tectonics boundaries Explain the formation and importance of mountains, karsts, plains and other landforms Explain how earthquakes and volcanoes are formed, predicted and monitored 	<ul style="list-style-type: none"> Chalk and talk by first drawing illustrations on the board followed by detailed explanation 	<p>https://www.youtube.com/watch?v=Ugwf6laE_k&list=PLFf-nI4ANXAcF1OcG-6fu9IzpsuMGGUIb</p> <ul style="list-style-type: none"> BBC class clip resources on Plate Tectonics https://www.bbc.co.uk/teach/class-clips-video/geography-ks3-plate-tectonics/zrc992p Lesson plan manual and pupil handbook 	<ul style="list-style-type: none"> List the types of plate tectonics
<p>Rocks and soils</p> <p><i>Rocks</i></p> <ul style="list-style-type: none"> Types, formation, and uses of rocks <p><i>Weathering</i></p> <ul style="list-style-type: none"> Types, factors affecting types and rate of weathering <p><i>Soil</i></p> <ul style="list-style-type: none"> Factors and processes of soil formation Soil profile Main soil types and characteristics Importance to humans The effects of human activities on soil 	<p>By the end of the topic pupils will be able to:</p> <ul style="list-style-type: none"> Define rocks, explain how they are formed and their uses List several types of rocks Define weathering and explain the factors that are responsible for weathering, and the types of weathering Define soil and illustrate and explain the soil profile Discuss the importance of soil to humans 	<ul style="list-style-type: none"> Short fieldwork around the school premises where pupils can collect rock and soil samples that can be examined and used to learn about rocks and soils Use posters to explain about rocks, weathering and soils Field trip to mudslide affected area 	<ul style="list-style-type: none"> Posters Lesson plan manual and pupil handbook Rock and soil samples Use Kobo Collect (free software https://www.kobotoolbox.org/) on mobile phones to interview residents about the 2017 mudslide and collect GPS coordinates that can be overlaid on Google Earth imagery to see the location before and after the mudslide 	<ul style="list-style-type: none"> Group presentation Short answer questions





<ul style="list-style-type: none"> • Soil erosion and conservation <p><i>Mass earth movements</i></p> <ul style="list-style-type: none"> • Soil creep • Mudslide • Rockfall • Factors affecting mass earth movement and control measures 				
<p>Vegetation</p> <ul style="list-style-type: none"> • Types and characteristics • Distribution patterns • Deforestation and its impacts on the environment • Conservation of vegetation resources 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> • List and explain vegetation types and their characteristics • Define and discuss the concept of deforestation and its impacts • Explain main conservation measures that can be used to protect important vegetation resources 	<ul style="list-style-type: none"> • Take pupils from known to unknown by asking questions such as: What major types of vegetation do you know? Where are these located? What are the uses and importance of vegetation cover? • Brainstorming and small group discussions 	<ul style="list-style-type: none"> • Google Earth imagery • Deforestation mapping https://mynasadata.larc.nasa.gov/basic-page/deforestation • Map of Sierra Leone showing distribution of major vegetation zones • YouTube videos on deforestation: 'What's causing deforestation in Africa and how to stop it,' DW News https://www.youtube.com/watch?v=GuZkwJAhzJM • National Geographic Climate 101: 'Deforestation' https://www.youtube.com/watch?v=lc-J6hcSKa8 	<ul style="list-style-type: none"> • Group presentations on conservation measures of vegetation
<p>Deserts</p> <ul style="list-style-type: none"> • Characteristics, landforms, physical processes, 	<p>By the end of this Topic, pupils will be able to</p>	<ul style="list-style-type: none"> • Assess pupils' prior knowledge by asking questions such as: What are 	<ul style="list-style-type: none"> • Posters and flash cards • YouTube videos on desert environments, e.g., 	<ul style="list-style-type: none"> • Short answer questions on deserts





<p>environmental problems and conservation measures</p>	<ul style="list-style-type: none"> Describe what deserts are, their locations around the world, and the types of deserts Identify and name key landforms of deserts Explain the processes of erosion and weathering in deserts State environmental problems of deserts and conservation measures to protect them 	<p>deserts? What are the main attributes of deserts?</p> <ul style="list-style-type: none"> Explain to pupils landforms and physical processes Use flash cards to illustrate features of deserts Small group discussions on problems and main solutions for deserts 	<p>National Geographic Deserts 101 https://www.youtube.com/watch?v=n4crvs-KTBw</p> <ul style="list-style-type: none"> Map showing distribution of deserts, e.g., BBC The global distributions of ecosystems https://www.bbc.co.uk/bitesize/guides/z2ntk7h/revision/3 	
<p>Climate and weather</p> <ul style="list-style-type: none"> The distinction between weather and climate Elements of climate: rainfall, temperature, humidity, air pressure, wind Instruments to measure the elements of weather Factors affecting the elements of climate – land and sea breeze, latitude, altitude, continentality Thunder and lightning Classification of climate Climate-related hazards – tornadoes, hurricanes, tsunamis Climate change – factors influencing climate change, impacts and measures 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> Define weather and climate Explain the difference between weather and climate Describe the processes of key climate and weather elements and how they are measured Explain the uses of a Stevenson's screen Explain the greenhouse effect, global warming and climate change Describe causes, impacts and measures to curb climate change 	<ul style="list-style-type: none"> Question and answer session to take pupils from known to the unknown, e.g., What do you understand about the terms weather, climate? List five elements of climate. How do we collect data on these elements? Explain each climatic element giving the instruments and how they are used Discuss climate change with scenarios of contemporary climate change issues such as the high incidences of bush fires, the melting of snow caps, increased extreme weather events (flooding, drought) and 	<ul style="list-style-type: none"> Lesson plan manual and pupil handbook Weather station Trailer clip from 'An Inconvenient Truth' (a 2006 documentary on climate change) https://www.youtube.com/watch?v=l-SV13UQXdk YouTube video showing current climate change issues around the world, e.g., National Geographic Climate Change 101 https://www.youtube.com/watch?v=G4H1N_yXBIA A global map showing climate change vulnerability 	<ul style="list-style-type: none"> Assignment on compilation and graphical presentation of rainfall in Sierra Leone for the past 5 years Group presentation on individual measures that can be adopted to mitigate climate change





<p>Hydrosphere The hydrological cycle</p> <ul style="list-style-type: none"> Oceans, lakes, rivers, Groundwater and surface water: supply and control Tides, waves, ocean currents Conservation of water resources 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> Explain the processes of the hydrological cycle Describe ground water and explain its importance and understand terms such as water table, aeration zone, saturation zone, aquifer etc Explain problems associated with water shortage List unsustainable water usage practices Explain impacts of using water 	<p>projected results and impact of sea-level rise</p> <ul style="list-style-type: none"> Navigate from known to unknown, e.g., What is the proportion of water in the human body? What is the proportion of the surface of the Earth covered by water? List all the uses of water you can think of. Where do you obtain potable water? Briefly describe the water cycle. Explain ground and surface water, water problems and water conservation 	<ul style="list-style-type: none"> Computer simulation of the water cycle Lesson plan manual and pupil handbook Field visit to a common water collection site during the dry season Visit to Guma, Babadorie, Congo or any nearby dam Diagrams and other learning resources on the water cycle from US Geographical Survey https://www.usgs.gov/special-topics/water-science-school/science/water-cycle-components 	<ul style="list-style-type: none"> Short answer questions e.g., What is an aquifer? Define evaporation and transpiration Presentations by pupils on individual and household strategies for water conservation
<p>The environment</p> <ul style="list-style-type: none"> Definition, classification (biotic and abiotic) Environmental resources (renewable and non-renewable) Types (minerals, water, vegetation, renewable and non-renewable energy sources) The importance of each resource 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> Define the environment List the components of the environment and give examples of each Differentiate between renewable resources and non-renewable resources and give examples of each 	<ul style="list-style-type: none"> Take pupils for a walk around school vicinity Start discussion and ask pupils what they have seen and what they have learnt 'environmentally' during the walk. Ask pupils, in whole-class discussion: When you think of the environment, what images come to your mind? What causes you to have 	<ul style="list-style-type: none"> Short videos on the environment and documentaries on YouTube and National Geographic website Lesson plan manual and pupil handbook 	<ul style="list-style-type: none"> Class presentation of a poster on the environment and its classification Short answer questions: What is the difference between the biotic and





		<p>these images? How can you classify the types of environments? What examples of the types of environments can you give?</p> <ul style="list-style-type: none"> List and explain five examples each of the biotic and abiotic environments Explain with examples what renewable and nonrenewable resources are List three examples of each type of resource Summarise key points in the lesson for pupils to copy as reference. 		<p>abiotic environment?</p> <ul style="list-style-type: none"> What is the difference between renewable and non-renewable resources?
<p>Environmental hazards and problems</p> <ul style="list-style-type: none"> Desertification, flooding, drought and pollution. Causes, impacts and measures to curb several types of hazards Environmental management 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> Define environmental hazards Explain the causes, impacts and measures of key environmental hazards (floods, drought) 	<ul style="list-style-type: none"> Ask questions to assess the pre-knowledge of pupils e.g., What is an environmental hazard? Explain environmental issues like climate change and flooding. What factors are responsible for the occurrence of such environmental problems? What measures should be employed to minimise these environmental problems? After ascertaining the existing knowledge pupils have, present and explain the content of the topic, 	<ul style="list-style-type: none"> YouTube videos of floods, drought Poster showing causes, impacts and measures to address various key environmental hazards Lesson plan manual and pupil handbook 	<ul style="list-style-type: none"> Group presentation on measures to curb environmental hazards





		using the lesson plan manual and pupil handbook and other learning resources		
--	--	--	--	--

Senior Secondary Level 2

Topic/Theme/Unit	Expected learning outcomes	Recommended teaching methods	Suggested resources	Assessment of learning outcomes
SS2 World population trends <ul style="list-style-type: none"> Population growth and distribution The main factors influencing population growth, such as topography, climate, soil, natural resources Impacts of population growth (hunger, economic effects, destruction of the environment, competition for resources, social tensions and conflicts) 	By the end of the topic, pupils will be able to: <ul style="list-style-type: none"> Define population, dense, sparse, population density Distinguish between population distribution and population density Discuss factors that favour or inhibit population growth Evaluate the impacts of population growth 	<ul style="list-style-type: none"> Group Discussions on: What is a population? What do we mean by sparse population, dense population, population density, and population distribution? Why do populations vary from place to place? Why are populations sparse in some places and dense in others? Learners summarise the concepts and factors that determine population increase and decrease, and the effects of population growth. 	<ul style="list-style-type: none"> World map showing population density YouTube video showing reasons for population growth, e.g., American Museum of Natural History, 'Human population through time' https://www.youtube.com/watch?v=G4H1N_yXBiA Lesson plan manual and pupil handbook 	<ul style="list-style-type: none"> Group presentation of two countries that have high population and low population, and the reasons for the high or low population
Human settlements	By the end of this topic, pupils will be able to: <ul style="list-style-type: none"> Define a settlement 	<ul style="list-style-type: none"> Ask questions to take pupils from known to the unknown e.g., What is a settlement? 	<ul style="list-style-type: none"> Lesson plan manual and pupil handbook 	<ul style="list-style-type: none"> Exercise to identify settlement





<ul style="list-style-type: none"> • Definition and types of settlements (rural and urban) • Functions of settlements • Settlement patterns • Factors affecting the location of settlements 	<ul style="list-style-type: none"> • List the types of settlements • List the functions of a settlement • Identify and describe settlement patterns <p>Discuss the factors which affect the location of settlements</p>	<p>What might make people settle in one location rather than another? When people settle in a location, what kinds of patterns can you see in how their houses are positioned in relation to one another?</p> <ul style="list-style-type: none"> • List and define types of settlements (including isolated, linear, nucleated and dispersed) • Chalk and talk: explain in detail the functions of settlement 	<ul style="list-style-type: none"> • Cadastral map (showing boundaries and ownership of land https://en.wikipedia.org/wiki/Cadastre) and topographical maps • Google images on patterns of settlements – photographs, diagrams and aerial views from Google Earth • Satellite images of settlements 	<p>patterns on maps</p>
<p>Human migration</p> <ul style="list-style-type: none"> • Types of migration: voluntary migration, forced migration, seasonal migration, internal migration (rural – urban, urban – rural), external / international migration (immigration, emigration) • People who migrate (immigrants, emigrants, refugees) 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> • List and define distinct types of migration • Describe and explain major reasons why people migrate • State some positive and negative impacts of migration • Cite historical and current examples of distinct kinds of migration and their features, relating to migration within Sierra Leone, into and out of Sierra Leone, and in other parts of the continent and the world 	<ul style="list-style-type: none"> • In full class mode, ask pupils what they know about migration • Elicit key words and phrases from the class and write them on the board • Link and group the words together on the board into a rough mind-map • Ask pupils why people migrate, and to give an example in each case • Add further points to the mind-map • Ask pupils in groups to discuss positive and negative aspects and 	<ul style="list-style-type: none"> • Lesson plan manual and pupil handbook • Videos found online dealing with migration patterns, examples and issues • Online articles and news stories relating to migration • Personal histories of families and figures within the community 	<ul style="list-style-type: none"> • Written or diagrammatic presentation of migration by each pupil, elaborated from the discussions, notes and presentations done in class and the pupils' own research





<ul style="list-style-type: none"> Reasons for migration: push and pull factors Impacts of migration 		<p>impacts of migration and to report back</p> <ul style="list-style-type: none"> When groups report back to the class, add key points to the mind map If available, show one or more short videos on migration, then discuss in class. Review the content of the pupil handbook with pupils 		
<p>Transportation</p> <ul style="list-style-type: none"> Modes (roads, railways, water, air, pipeline) Transportation and economic development Problems of transportation and their solutions. 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> List various modes of transportation, their usage and advantages of one mode over the other Discuss the relationship between transportation and economic development and the impacts of transport on economic development State problems caused by transport on the environment and their solutions 	<ul style="list-style-type: none"> Small group discussion: Pupils brainstorm on various transport modes and which modes of transport they would prefer to use (and why) Chalk and talk: explain transportation and issues apply to each mode. Discuss with pupils Ask pupils each to write a summary of their understanding and views of each mode and the issues, in general principle and as applicable to Sierra Leone. 	<ul style="list-style-type: none"> Lesson plan manual and pupil handbook YouTube video showing transportation modes 	<ul style="list-style-type: none"> Presentation on the transportation modes in Sierra Leone
<p>The tourism industry</p> <ul style="list-style-type: none"> Meaning, centres, reasons (leisure, recreation, education) 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> Describe the tourism industry, the reasons and importance for tourism 	<ul style="list-style-type: none"> In full class, show pupils pictures of touristic centres and ask pupils their thoughts while viewing pictures. 	<ul style="list-style-type: none"> Computer or smartphones and internet access Lesson plan manual and pupil handbook 	<ul style="list-style-type: none"> Presentation on the tourism sector in Sierra Leone





<ul style="list-style-type: none"> • Importance of tourism • Eco-tourism • problems and solutions 	<ul style="list-style-type: none"> • Identify key problems of tourism and their solutions 	<ul style="list-style-type: none"> • Ask pupils: Why do you think people go on vacation? Why is tourism important? What is ecotourism? • PowerPoint presentation on tourism with scenarios from various parts of the world, the importance of tourism, problems that can be caused by tourism, and how problems are solved. • Virtual tour of important tourist sites on Google Earth 		
<p>Sustainable development</p> <ul style="list-style-type: none"> • Definition of sustainable development • The pillars of sustainable development • Sustainable development as distinct from economic development 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> • Define the concepts of sustainable development and of economic development • List and explain the pillars and key components of sustainable development • Distinguish between the concept of sustainable development and that of economic development 	<ul style="list-style-type: none"> • Discuss with the class to find out what they understand or believe already about the development, economic development and sustainable development • Present poster and YouTube video material as prompt and support for further discussion • Present material from the lesson plan manual and pupil handbook 	<ul style="list-style-type: none"> • YouTube video on sustainable development • Lesson plan manual and pupil handbook • Poster that summarises the concept of sustainable development, illustrating ecological, economic and socio-cultural components 	<ul style="list-style-type: none"> • Short answer test
<p>Geography of Africa Location and physical environment</p>	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> • Identify the continent of Africa and its location on a world map 	<ul style="list-style-type: none"> • Show pupils videos on the geography of Africa from YouTube or other suitable sources. Ask questions, including: What is the size 	<ul style="list-style-type: none"> • Geography of Africa videos from YouTube • Global map • Maps of Africa showing political boundaries, 	<ul style="list-style-type: none"> • Exercise to draw outline maps of Africa indicating climate,





<ul style="list-style-type: none"> • Location of Africa on the globe and its physical environment • Location, position, size, political divisions • Physical regions of Africa • Relief and drainage (main river systems) • Climate, vegetation, and ecology • Natural resources 	<p>with its political boundaries and neighbouring boundaries</p> <ul style="list-style-type: none"> • List and explain the major landscape features of Africa and where they are found (rivers, lakes, rift, valleys, mountains, deserts, forests, savannahs) 	<p>of Africa? What is the climate of Africa like? What are the vegetation types in Africa? List the main rivers in Africa</p> <ul style="list-style-type: none"> • Ask pupils to sketch an outline of Africa and indicate key physical features such as: the Nile River, the Sahara Desert • Draw a large outline of Africa on the board. Ask pupils to add the borders of countries in Africa. • Use pupils' responses to discuss topics in depth, focusing on areas where pupils are weak 	<p>climate, vegetation and physical features</p>	<p>vegetation and physical features</p> <ul style="list-style-type: none"> • Draw a map of Africa marking country borders and names
<p>Population dynamics</p> <ul style="list-style-type: none"> • Population distribution and density • Migration: rural to urban, brain drain • Urbanisation and its impacts on African economies • Social issues; inequality, tribal, religious and regional conflict 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> • Indicate on a map of Africa the population distribution of countries in Africa, showing countries that are densely populated and those that are sparsely populated • Suggest reasons for the varied population densities • Explain migration in Africa, causes for it • Explain what is meant by 'brain drain,' its relevance in Africa and its impact on the continent 	<ul style="list-style-type: none"> • Present a video on the population of the African continent from YouTube, then ask pupils questions e.g., List three densely populated countries in Africa, List 3 sparsely populated countries in Africa, and give reasons for the high or low population of each country. What is 'brain drain' and how does Africa suffer from brain drain? Are there any beneficial effects of brain drain? If yes, what 	<ul style="list-style-type: none"> • Lesson plan manual and pupil handbook • Video on YouTube about the populations of Africa and their densities, migration, and issues arising • Map of Africa showing population density 	<ul style="list-style-type: none"> • Groupwork research one country that has experienced war as a result of tribal differences, natural resources conflict, religious intolerance





	<ul style="list-style-type: none"> Describe in outline issues of urbanization, how urbanization affects African economies and rural and urban societies Discuss and express views on social problems in Africa including inequality, land rights, tribal, religious and regional conflicts and their impacts 	<p>are they? What is rural to urban migration? What effects does it have?</p> <ul style="list-style-type: none"> Chalk and talk to delve into each area and to present specific examples 		
<p>Economic activities and the environment</p> <ul style="list-style-type: none"> Agriculture Mining Manufacturing industries 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> Outline the major economic activities in Africa looking specifically at agriculture, mining and manufacturing industries 	<ul style="list-style-type: none"> Show YouTube video of African economies Small group discussions where pupils will brainstorm, and different groups then present on agriculture, mining and manufacturing industries 	<ul style="list-style-type: none"> Video from Displore on YouTube, Top 10 largest economies in Africa (GDP) in 2020 https://www.youtube.com/watch?v=7PT2Bh-xG4 Lesson plan manual and pupil handbook Map of Africa showing economic activities 	<ul style="list-style-type: none"> Case study of the contrasting economies in Tanzania, Ghana and Niger, or of other African countries
<p>Transport and trade</p> <ul style="list-style-type: none"> Land, air and sea transport Regional integration in Africa Power (energy) production and development in Africa: Hydro-electric, solar energy 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> Discuss the transportation systems of Africa Discuss the trade and regional integration in Africa Describe and state the relative scale of electricity generation and supply in Africa and the potential for renewable energy in Africa Name examples of major hydro-electric, solar and other energy production sites in Africa 	<ul style="list-style-type: none"> Show YouTube videos on: Transport of goods across sub-Saharan Africa. Ask pupils: What do you think of the transportation systems in Africa? How do they affect trade? Is free trade a solution for successful trade in Africa? 	<ul style="list-style-type: none"> Video from YouTube (transporting goods across sub-Saharan Africa; How Africa's trading blocs can benefit from international trade, https://www.youtube.com/watch?v=piRz3v6hgRs African energy discussions, e.g., BBC article 'Africa grapples with clean energy conundrum' 	<ul style="list-style-type: none"> Case study of renewable energy in Africa e.g., South Africa, Kenya, Nigeria





			<p>https://www.bbc.co.uk/news/world-africa-51615647</p> <ul style="list-style-type: none"> Lesson plan manual and pupil handbook 	
<p>The changing African landscape</p> <ul style="list-style-type: none"> Desertification Deforestation Natural disasters 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> Discuss how human activities and natural events transform the landscape in Africa – in the past, the present and the projected future Cite evidence to support their understanding of the changing African landscape 	<ul style="list-style-type: none"> Show videos on the Great Green Wall project Discussion on the successes and failure of the project Discussion on deforestation in Africa 	<ul style="list-style-type: none"> Lesson plan manual and pupil handbook M20 Aljazeera report on Sahel's Great Green Wall https://www.aljazeera.com/videos/2019/12/3/great-green-wall-villagers-defence-against-desertification The Communities say project trees are failing (A BBC report on 'The Great Green Wall of Africa, will it help fight climate change?' https://www.youtube.com/watch?v=HVOYN70scS8 	<ul style="list-style-type: none"> Debate on the Great Green Wall project Case study of deforestation in Congo and how it has transformed the landscape





Senior Secondary Level 3

Topic/Theme/Unit	Expected learning outcomes	Recommended teaching methods	Suggested resources	Assessment of learning outcomes
<p>SS3 Maps, map-reading and interpretation</p> <p>Maps</p> <ul style="list-style-type: none"> • Meaning, types and elements of a map • Map reading and interpretation based on contoured survey maps of parts of West Africa: • Map scale: types, scale conversion • Measuring distances and areas on a map • Direction and bearing • Map reduction and enlargement • Contour maps and landforms • Identification of physical features such as hills, spurs, valleys, cultural features, settlements, and 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> • Demonstrate general understanding of maps and how maps can be interpreted • Read map scales, name the distinct types of scales, and carry out conversions from one scale to another • Measure straight and curved distances from maps using scrap paper, ruler, dividers or thread and calculate to convert from map distance to actual distance • Reduce or enlarge maps at given scales • Interpret contour lines from maps and use them to interpret landforms and slopes • Draw cross sections derived from contours on a map to determine intervisibility of points • Interpret settlement patterns, drainage patterns and flow direction, communication routes and land use patterns on topographical maps 	<ul style="list-style-type: none"> • Hold practical sessions using maps 	<ul style="list-style-type: none"> • Lesson plan manual and pupil handbook • Topographical maps • Mathematical sets, thread, graph paper • YouTube videos • Reproductions of aerial photographs and satellite images 	<ul style="list-style-type: none"> • Class exercises and homework on the various calculations and drawings studied





<p>communication routes</p> <ul style="list-style-type: none"> • Measurement of gradients • Drawing profiles and cross sections • Inter-visibility • Drainage characteristics and patterns • Patterns of communication, settlement and land use <p><i>Aerial photography / satellite image interpretation</i></p> <ul style="list-style-type: none"> • Definition • History of Aerial photography • Vertical and oblique aerial photographs • Panchromatic (black and white) and coloured images • Elements of aerial photograph interpretation 	<ul style="list-style-type: none"> • Describe the basics of aerial photography and the elements that are used in interpreting aerial photographs 			
---	---	--	--	--





<p>Statistical maps and diagrams, and surveying</p> <ul style="list-style-type: none"> Bar graphs, line graphs, flow charts, dot maps, proportional circles, density maps, isopleth maps <p><i>Principles of elementary surveying</i></p> <ul style="list-style-type: none"> Definitions of: Instruments, chain and prismatic compass, plotting of traverse Avoiding obstacles in the field 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> Describe the use of data to create different kinds of graphs, maps and charts Explain the meaning of basic surveying terms Undertake a survey exercise in the field 	<ul style="list-style-type: none"> Present worked examples of using data to create charts, maps and graphs Chalk and talk Field work 	<ul style="list-style-type: none"> Graph book Lesson plan manual and pupil handbook Prismatic compass, chain, tripod 	<ul style="list-style-type: none"> Exercises Field work
<p>Geographic Information System (GIS)</p> <ul style="list-style-type: none"> Basic concepts of GIS Components of GIS Sources of geographical data Uses of GIS Limitations of GIS 	<p>By the end of this topic, the pupils will be able to:</p> <ul style="list-style-type: none"> Show an understanding of basic GIS concepts such as the definition of GIS, and a history of its development. Outline basic components of a GIS Explain the uses of GIS data List problems encountered with using GIS data 	<ul style="list-style-type: none"> Explain using a computer demonstration what GIS is, what it does, and its development Explain components that are required for a GIS to work well, using a poster Outline the sources of geographical data using printed sheets/displays. PowerPoint presentation on uses of GIS with pictures and demonstrations. Explore various GIS environments (QGIS, 	<ul style="list-style-type: none"> Lesson plan manual and pupil handbook YouTube videos on GIS fundamentals (many versions are available) Computer Smartphones QGIS software https://en.wikipedia.org/wiki/QGIS Explanation of The Global Positioning System (GPS) https://www.gps.gov/ 	<ul style="list-style-type: none"> Hands-on exercise exploring spatial data in QGIS Fieldwork to collect GPS data





		<p>Google Earth, Google Maps)</p> <ul style="list-style-type: none"> • Explore collecting GPS data on smartphones using GPS apps 		
<p>Regional geography of Sierra Leone</p> <ul style="list-style-type: none"> • Location, size, neighbours and administrative divisions • Physical features, climate and vegetation, natural resources • Population and ethnicity • Migration - rural and urban, voluntary and forced 	<p>By the end of this topic, pupils will be able to:</p> <ul style="list-style-type: none"> • Show the location of Sierra Leone on a map of Africa • Draw the borders with neighboring countries and administrative and political boundaries within Sierra Leone • The physiography, vegetation and climate of Sierra Leone • Discuss population dynamics and ethnicity of Sierra Leone • Rural – urban migration and its effects in the country • Forced migration during the civil war 	<ul style="list-style-type: none"> • Discussion to assess pre-knowledge of pupils: Where is Sierra Leone located and what international borders does the country have? List the main rivers and mountains in the country. Explain the vegetation types and climate of Sierra Leone. Which areas are densely populated and sparsely populated in Sierra Leone? What are the ethnic groups of Sierra Leone? • Teach the new information using available teaching and learning materials • Discuss the impacts of rural-urban migration in Sierra Leone • Use videos and other materials as stimuli for focused exploration and examination of facts about the country 	<ul style="list-style-type: none"> • Lesson plan manual and pupil handbook • YouTube; Geography Now! Sierra Leone https://www.youtube.com/watch?v=ff4V8L_VAwQ • Maps of Sierra Leone showing vegetation, climate etc • A New Geography of Sierra Leone (School Certificate geography), Gwynne-Jones, D. R. G., Longman 1978 	<ul style="list-style-type: none"> • Presentation of group projects about aspects of the geography of Sierra Leone





Economic activities of Sierra Leone

Primary economic activities

- Agriculture: Subsistence and cash crop farming; livestock, Problems and solutions
- Fishing: Inland and ocean, fishing methods, storage and marketing, problems and solutions
- Mining; Types, distribution of minerals, methods of extraction, problems and solutions.
- Lumbering: Meaning of lumbering, Sources of timber, methods of exploitation, types of species (for internal use and for export), problems and solutions, conservation

Transport and Communications

By the end of this topic, pupils will be able to:

- Name the primary economic activities in Sierra Leone
- Explain the meanings and give some examples of primary, secondary and tertiary economic activities
- State and explain in summary the main problems each of the identified economic activity faces and practical solutions to address the problems
- State the estimated total economic value of agriculture, fishing, mining, and timber lumbering in the country

- Lead pupils in discussion of the primary economic activities in Sierra Leone
- Tell the class the topic; then ask each pupil to think and write down all the different kinds of work people do in Sierra Leone.
- Introduce the terms and meanings of primary, secondary and tertiary economic activities.
- Then ask pupils in pairs to compare their lists and label each kind of work as primary, secondary or tertiary economic activity.
- Put three headings across the board, primary, secondary and tertiary. Ask pupils to say what they have listed as primary economic activities.
- Have a volunteer pupil write them on the board. Raise and queries, ask the class if they agree, ask why.
- Make any corrections as the list evolves, with brief explanations.
- Explore more deeply with pupils primary economic activities taking place in

- Lesson plan manual and pupil handbook
- YouTube videos and news items on different featured economic activities in Sierra Leone – agriculture, fishing, mining, timber lumbering, transportation
- Summary information from online sources, e.g., 'What is Primary Economic Activity?' (2021, Carbon Collective) <https://www.carboncollective.co/sustainable-investing/primary-economic-activity>
- Resource people from local industries in the school location
- Field visits to local industries

- Group presentation of their reports from field work visit to a local primary economic activity, describing the activity, indicating problems and suggested solutions to the problems.





<ul style="list-style-type: none"> Problems of transport and communications, and solutions <p><i>Trade</i></p> <ul style="list-style-type: none"> Internal and external trade <p><i>Manufacturing</i></p> <ul style="list-style-type: none"> Types of industries Manufacturing industry problems and solutions <p><i>Energy and power</i></p> <ul style="list-style-type: none"> Water, fuelwood, charcoal, biogas (e.g., cow-dung) Hydro-electric power projects (e.g., Dodo, Guma, Bumbuna) Solar power 		<p>their area, or in which they have family or friends involved, or which are in the news.</p> <ul style="list-style-type: none"> Engage pupils in field visit and write up on a local primary economic activity 		
--	--	---	--	--

