

The New Senior Secondary Curriculum for Sierra Leone

Subject syllabus for Climate Change Awareness, Preparedness and Resilience
Subject stream: Sciences and Technologies



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 Climate Change Awareness, Preparedness and Resilience - a core subject

Subject Description

This subject provides students with an introduction to climate change and its impact. Students will learn the causes and impacts of climate change facing the world today as well as possible solutions to address them. This will enable students to explain the roles and responsibilities of individuals, communities, organisations and governments in mitigating the effects of climate change, and to building resilient communities. It is also hoped that the behaviour and actions of students will be influenced by studying towards becoming more responsible through judicious use of resources and decisions that will contribute towards minimising the negative effects of climate change.

Rationale for the inclusion of Climate Change Awareness, Preparedness and Resilience in the Senior Secondary School curriculum

Studying climate change will:

- a. Help create resilient communities who can mitigate its negative impact on agriculture, livelihoods, health and other aspects of life.
- b. Promote the development of a variety of skills including problem solving, critical thinking, data handling and data analysis.
- c. Increase awareness among students of their actions on the environment which, it is hoped, will promote more sustainable use of resources.
- d. Encourage students to actively engage in addressing climate change related problems and to make their own information-based decisions.
- e. Contribute to creating a new generation of informed citizens.

General Learning Outcomes

At the end of the course, students will be able to:

- a. Explain the causes of climate change and key terms used to describe climate change such as global warming and the greenhouse effect
- b. Measure climatic processes and their measurements.
- c. Understand the natural as well as anthropogenic causes of climate change, their general effects on man and the environment and specific impacts on sectors such as health, food and agriculture, water resources.
- d. Examine data showing, for example, the changes in sea level, and surface and sea temperatures because of changes in the amount of carbon dioxide in the atmosphere and predict future trends.
- e. Explain key concepts on disaster risk management and early warning systems related to climate change for disaster preparedness and response.
- f. Discuss climate change vulnerability, mitigation and adaptation measures at individual, regional and global levels.



- g. Share knowledge about climate change resilience and steps in building resilient communities.
- h. Make recommendations on waste generation, disposal and awareness on sustainable waste management practices as well as sustainable approaches in managing natural resources.
- i. Explain the likely impacts of climate change in Sierra Leone and how to adapt and prepare.
- j. Develop a concern for accuracy and objectivity in collecting, recording, processing, presenting, analysing and interpreting climatic data for informed decision making.

Topics/Themes included in the syllabus

1. Weather and climate
2. Climate change
3. Climate change trends and predictions
4. Disaster Risk Management, vulnerability, early warning systems and preparedness for climate change
5. Climate change mitigation and adaptation
6. Climate change and sustainability
7. Climate change resilience
8. International organisations, policies and frameworks
9. Geography of Sierra Leone
10. Vulnerability and impacts of climate change in Sierra Leone





Structure of the Syllabus Over the Three Year Senior Secondary School Cycle

| | SSS 1 | SSS 2 | SSS 3 |
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| Term 1 | <p>Weather and Climate</p> <ul style="list-style-type: none"> • Definitions of weather and climate • Elements of climate and the instruments used to collect data about them: Rainfall, temperature, wind, humidity, atmospheric pressure • El Nino, la nina and El nina effect • Presentation of climatic data <p>Climate Change concept:</p> <ul style="list-style-type: none"> • Definitions key terms – global warming, climate change, greenhouse effect, ozone layer depletion, carbon footprint, hazard, risk, • Causes of climate change- Natural climate change and anthropogenic climate change • Major greenhouse gases (carbon dioxide, methane, nitrous oxide, halocarbons/CFCs), sources and impacts • Major contributors to climate change • Global effects of climate change - sea level rise, erratic weather, intensity of rainfall, bushfires • Impacts of climate change on - agriculture and food, shelter, water resources and health • Evidence of climate change – recent and historical evidence • Climatic hazards- tropical storms, drought, wildfires, flooding | <p>Climate Change Mitigation, Adaptation</p> <ul style="list-style-type: none"> • Definition of terms – mitigation, adaptation, resilience • Climate change mitigation and adaptation strategies • Individual Climate change mitigation <p>Climate change and sustainability</p> <ul style="list-style-type: none"> • Definition of terms- sustainable development; climate justice, biodiversity • Pillars/components of sustainable development- economic, socio-cultural and environmental • Sustainable natural resources management: forests, water, marine, minerals • Climate change and biodiversity conservation • Carbon sequestration and the carbon trade • REDD+ • SDGs and climate change • Climate change and waste management | <p>Vulnerability and impacts of climate change in Sierra Leone</p> <ul style="list-style-type: none"> • Climate scenarios- temperature, precipitation, evaporation, solar radiation • Vulnerability (current and future) and impact of major sectors- agriculture, water, health, forests, fisheries, coastal zones |



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| <p>Term 2</p> | <p>Climate change trends and predictions</p> <ul style="list-style-type: none"> • Definition of climate models and their importance • Paleoclimate • Changes in surface temperature, sea level rise and sea surface temperature in recent years • Accuracy of climate change models <p>Disaster Risk Management and Climate Change</p> <ul style="list-style-type: none"> • Common terminologies- disaster risk, emergency services etc • Hazards and types of hazards- on going/rapid and slow on set/ creeping hazards • characteristics of disaster • Types of disaster • Phases of disasters: mitigation, disaster preparedness, response, recovery • Climate change as a disaster risk driver - hurricanes, flooding, wildfires, landslides etc • Climate and disaster risk screening • The relationship between disasters and development • Impacts of disasters on development | <p>Climate change resilience</p> <ul style="list-style-type: none"> • Definition of terms - climate change resilience, climate resilient planning, community resilient plan • The pillars of climate resilience - threshold capacity, coping, recovery, adaptive and transformative capacity. • Importance of climate change resilience • Steps in building a resilient community: risk assessment, development and implementation of a community resilience plan • Creating resilient agriculture systems <p>Climate change international Organisations, Policies and frameworks</p> <p>UN organisations - UNEP, WMO, International bodies - Green climate fund, c40 cities, 350.org, climate Investment Fund (CIF)</p> <ul style="list-style-type: none"> • IPCC • The UNFCCC-COP • THE Kyoto Protocol • The Clean Development Mechanism (CDM) <p>The Paris Agreement</p> | <p>Greenhouse gas emissions in Sierra Leone</p> <p>Emissions of major GHGs from: energy sector (fuel combustion), vehicle emissions, industrial processes, agriculture (prescribed burning of savannas and field burning of agricultural residues), land use change and forestry (forest and grassland conversion), waste management</p> |
| <p>Term 3</p> | <p>Climate Vulnerability</p> <ul style="list-style-type: none"> • Definition of climate vulnerability or climate risk vulnerability, climate justice • Types of climate vulnerability- economic and geographic vulnerability | <p>Climate change in Sierra Leone and the geography of Sierra Leone</p> <ul style="list-style-type: none"> • Location • Climate • Topography • Vegetation • water | <p>Climate Change Adaptation and Mitigation in key economic sectors</p> <ul style="list-style-type: none"> • Agriculture • Fisheries • Water resources • Health • Settlements |



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| <ul style="list-style-type: none">• Climate Vulnerability in developing countries and small island states• Vulnerability of disadvantaged groups- people with low incomes, women, indigenous people• Climate vulnerability assessments <p>Early warning systems and preparedness for Climate Change</p> <ul style="list-style-type: none">• Definition of terms- early warning system, forecast, now cast• Risk data• Importance of early warning systems• Components/elements of EWS- risk knowledge, monitoring and warning systems, dissemination and communication and preparedness and response capability | <ul style="list-style-type: none">• Population• Economic and social development• Climatic/ environmental hazards in Sierra Leone- floods, mudslides/landslides, rock falls, dry spells, bush fires, tropical storms, coastal erosion etc | <ul style="list-style-type: none">• Civil society's role in curbing climate change in Sierra Leone - ENFORAC, Green scenery |
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Teaching Syllabus

Year 1

| Topic/Theme/Unit | Expected learning outcomes | Recommended teaching methods | Suggested resources | Assessment of learning outcomes |
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| Weather and Climate <ul style="list-style-type: none"> Definition of weather and climate Elements of climate (rainfall, temperature, wind, humidity) and instruments to measure them El Nino, la nina and El nina effect Presentation of climatic data | Students will be able to: <ul style="list-style-type: none"> Explain the terms weather and climate and the difference between them Explain the process of key weather elements and how they are measured Explain the uses of a Stevenson screen | Question and answer session to take students from known to the unknown. For example: <ul style="list-style-type: none"> What is weather? What is climate? Is the meaning of climate and weather the same or different? What is the difference? Share an explanation of weather and climate with students. Explain each of the climatic elements (temperature, rainfall, wind, atmospheric pressure, humidity) Visit a weather station or use photographs to show a Stevenson screen and instruments used to measure each element. Explain how instruments are used. | Weather station | Compilation and graphical presentation of rainfall in Sierra Leone for the past 5 years |
| Climate Change concept: <ul style="list-style-type: none"> Definitions key terms – global warming, climate change, greenhouse effect, ozone layer depletion, carbon footprint Causes of climate change- Natural climate change and | Students will be able to: <ul style="list-style-type: none"> Define key terms such as climate change, global warming, the greenhouse effect, carbon footprint and distinguish between global warming vs climate change Know the causes of climate change because of natural | Play a short video about climate change from YouTube. Ask questions to assess the students' understanding. For example: What is a climate change? What is global warming? What is the difference between global warming and climate change? How have humans changed the climate? List three major greenhouse gases and their sources? Give 5 effects of climate change | Short video on YouTube about climate change https://www.youtube.com/watch?v=EuwMB1Dal-4 <ul style="list-style-type: none"> National Geographic Causes and effects of climate change https://www.youtube.com/watch?v=G4H1NyXBIA | Group presentation on the impact of climate change on small island states Global warming and Climate change model showing causes, effects and solutions for climate change |



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| <p>anthropogenic climate change</p> <ul style="list-style-type: none"> • Major greenhouse gases, sources, impacts -carbon dioxide, methane, nitrous oxide, halocarbons/ CFCs • Major contributors to climate change • Communities and countries most Vulnerable to climate change • Global effects of climate change- sea level rise, erratic weather, intensity of rainfall, bushfires • Impacts of climate change on - agriculture and food, shelter, water resources and health • Evidence of climate change- Historical and recent evidence • Climatic hazards- tropical storms, drought, wildfires, flooding | <p>events and as a result of man's actions.</p> <ul style="list-style-type: none"> • Explain the sources and impacts of some of the major greenhouse gases • Discuss the impacts of climate change on shelter, agriculture, water, etc. • Explain some of the evidence of climate change both globally and locally • Discuss about the most vulnerable to climate change and reasons for that. | <p>Provide a detailed explanation with supporting diagrams of climate change, global warming, greenhouse effect.</p> <p>https://news.climate.columbia.edu/2021/02/25/carbon-dioxide-cause-global-warming/</p> <p>Explain with supporting pictures of general effects of climate change as well as impacts on agriculture, health and water resources</p> <p>https://www.nrdc.org/stories/what-are-effects-climate-change</p> | | |
| <p>Climate change trends and predictions</p> <ul style="list-style-type: none"> • Definition of climate models and their importance | <p>Students will be able to:</p> <ul style="list-style-type: none"> ▪ Explain how the surface temperatures, sea levels and sea surface temperatures | <p>Power point presentation showing facts and graphs of changes in climate over the years with simple and clear explanation of basic climate change models</p> | <p>YouTube documentary on climate change trends</p> <p>NASA's interactive climate time machine on https://climate.nasa.gov/i</p> | <p>Class group project demonstrating sea level rise</p> <p>Class group presentations of results</p> |



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| <ul style="list-style-type: none"> • Paleoclimate • Changes in surface temperature, sea level rise and sea surface temperature in recent years • Accuracy of climate change models | <p>have been changing over the years</p> <ul style="list-style-type: none"> ▪ Describe how computer simulations use different scenarios to predict future trends in climate. ▪ List examples of models and scenarios to predict climate change | <p>Ask questions to assess level of understanding of students. For example:</p> <ul style="list-style-type: none"> – What is a climate model and why is it important? – How can we track and understand ancient climate variations? – What is the current status of the global climate? – Which years have been recorded as being the hottest? | <p>interactives/climate-time-machine A global map showing human footprint A very simple climate model simulation available at The Very Simple Climate Model Activity Center for Science Education (ucar.edu)</p> | <p>from using various scenarios of the very simple climate model.</p> |
| <p>Disaster Risk Management, and climate change</p> <ul style="list-style-type: none"> • Common terminologies- disaster risk, emergency services etc • Hazards and types of hazards- on going/rapid and slow on set/ creeping hazards • characteristics of disaster • Types of disaster • Phases of disasters: mitigation, disaster preparedness, response, recovery • Climate change as a disaster risk driver- hurricanes, flooding, wild fires, landslides etc | <p>Students will be able to:</p> <ul style="list-style-type: none"> ▪ Explain terms like disaster, hazards, risk, etc ▪ Phases of disasters and how they can be managed <p>List and discuss common disasters intensified by climate change</p> | <p>Question and answer session to take students from known to the unknown. For example:</p> <ul style="list-style-type: none"> – What do you understand about the term disaster? – List the types of disaster? – Give examples of disasters that have taken place that you know. <p>Field trip to a local area that has recently experienced a disaster e.g. mortomeh, Kroo bay where questionnaires can be administered to residents regarding their experiences in terms of the early warning system before the disaster occurred, the preparedness for the disaster, emergency response, impacts of the disaster and how they are recovering</p> <p>Field visit to the National Disaster Management Agency</p> | <p>Video showing hurricane Katrina in 2005 Colombia floods in 2022, 2004 Indian ocean tsunami, and the 2021 wild fires in various locations around the world https://www.youtube.com/watch?v=Ves3P5tX-PC https://www.youtube.com/watch?v=xeY9miTqzEA https://www.preventionweb.net/understanding-disaster-risk/risk-drivers/climate-change World bank website on climate and disaster risk screening https://climatescreeningtools.worldbank.org/</p> | <p>Group presentation of a successful early warning system.</p> <p>Group discussion on the National Disaster Management Agency in Sierra Leone- structure and functions, challenges and recommendations for its efficient running.</p> |





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| <ul style="list-style-type: none"> • Climate and disaster risk screening • The relationship between disasters and development • Impacts of disasters on development | | | <p>Android phones and a computer for design and collection of questionnaires using opensource data collection software such as ODK or Kobo collect</p> | |
| <p>Climate Vulnerability</p> <ul style="list-style-type: none"> • Definition of climate vulnerability or climate risk vulnerability, climate justice • Types of climate vulnerability- economic and geographic vulnerability • Climate Vulnerability in developing countries and small island states • Vulnerability of disadvantaged groups- people with low incomes, women, indigenous people Climate vulnerability assessments | <p>Students will be able to:</p> <ul style="list-style-type: none"> ▪ Define climate vulnerability ▪ Discuss the most vulnerable to climate change and why? ▪ Examine tools used for climate vulnerability assessment | <p>Field Visit to Kroo bay and Funkia-Goderich.</p> <p>Observations and interviews can be conducted to find out how vulnerable residents are to climate change in terms of their livelihoods etc</p> | <p>Android phones and a computer for design and collection of questionnaires using open source data collection software such as ODK or Kobo collect.</p> <p>A global map showing climate change vulnerability</p> <p>YouTube video from IIED https://www.youtube.com/watch?v=BpsWC6Vhd4</p> | <p>Group presentation of climate change vulnerability of a developing country</p> <p>Presentation of findings from field trip.</p> |





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| <p>Early warning systems and preparedness for Climate Change</p> <ul style="list-style-type: none"> • Definition of terms- early warning system, forecast, now cast • Risk data • Importance of early warning systems • Components/ elements of EWS- risk knowledge, monitoring and warning systems, dissemination and communication and preparedness and response capability | <p>Students will be able to:</p> <ul style="list-style-type: none"> ▪ Explain terms like early warning system etc • Explain the importance of early warning system and the four elements of early warning systems | <p>Question and answer session to take students from known to the unknown. For example:</p> <ul style="list-style-type: none"> – what comes to your mind when the term early warning is mentioned? – Is early warning beneficial? If yes how? – Give scenarios in which early warning systems can be used <p>Explain the importance of early warning systems and using a diagram to clearly explain the elements</p> | <p>YouTube videos on early warning systems World economic forum video on early warning system https://www.weforum.org/videos/an-early-warning-system-could-save-countries-from-some-of-the-worst-effects-of-climate-change</p> <p>Field visit to the National Disaster Management Agency and find out about their early warning system</p> | <p>Presentation form field visit</p> |
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Year 2

| Topic/Theme/Unit | Expected learning outcomes | Recommended teaching methods | Suggested resources | Assessment of learning outcomes |
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| Climate Change Mitigation, Adaptation <ul style="list-style-type: none"> • Definition of terms – mitigation, adaptation, resilience • Climate change mitigation and adaptation strategies • Individual Climate change mitigation | Students will be able to: <ul style="list-style-type: none"> ▪ Differentiate between mitigation and adaptation ▪ Discuss global and local climate change strategies ▪ Identify individual measures that they can implement to combat climate change ▪ Identify the role of civil societies in combating climate change ▪ change | Navigate from known to unknown. For example: <ul style="list-style-type: none"> – What are the effects of climate change? – What can be done to reduce the effects of climate change? Explain mitigation and adaptation to students so that they can understand the terms well to distinguish one from the other | Power point presentation showing pictures of climate change mitigation and adaptation measures YouTube video on climate change adaptation in Sierra Leone https://www.youtube.com/watch?v=sLR-PUxSLxk | Group Presentation on individual measures that can be adopted to mitigate climate change |
| Climate change and sustainability <ul style="list-style-type: none"> • Sustainable development; climate justice, biodiversity • Pillars/Components of sustainable development- economic, socio-cultural and environmental • Sustainable natural resources management: forests, water, marine, minerals | Students will be able to: <ul style="list-style-type: none"> • Define terms such as sustainable development, climate justice etc. • Illustrate and explain the pillars of sustainable development • Ask students to brainstorm in small groups and discuss how biodiversity can mitigate climate change • Teacher can then clarify and give in-depth explanation | Test pre knowledge of students by asking questions such as: <ul style="list-style-type: none"> – What is sustainable development? – What is climate justice? – List ways in which forests, water, marine and minerals can be sustainably managed? – Which SDGs address climate change? Summarize by giving a detailed explanation of key terms | YouTube video of sustainable development, biodiversity conservation and waste management Flash cards with definition of terms such as climate justice, sustainable development | Short answer questions Presentation Implementation of waste management practices by students |



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| <ul style="list-style-type: none"> • Climate change and biodiversity conservation • Carbon sequestration and the carbon trade • REDD+ • SDGs and climate change • Climate change and waste management | <ul style="list-style-type: none"> • Explain some sustainable waste management approaches • Ask students to waste using any sustainable waste management approach | | | |
| <p>Climate change resilience</p> <ul style="list-style-type: none"> • Definition of terms- climate change resilience, climate resilient planning. Community resilient plan • The pillars of climate resilience- threshold capacity, coping, recovery, adaptive and transformative capacity. • Importance of climate change resilience • Steps in building a resilient community - assess risk of the community, develop a community resilience plan and implement the community development plan | <p>Students will be able to:</p> <ul style="list-style-type: none"> • Define terms such as resilience, community resilience plan etc. • Explain the importance of climate change resilience • Explain the pillars of climate resilience • Explain basic steps in building a resilient community | <p>YouTube video on climate change resilience Small group discussion and presentation</p> | <p>Course book YouTube video World bank's open knowledge repository website https://openknowledge.worldbank.org/handle/10986/35039</p> | <p>Round table discussion of how to build communities resilient to climate change</p> |





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| <p>International organisations, policies and frameworks UN organisations- UNEP, WMO, International bodies: Green climate fund, c40 cities, 350.org, climate Investment Fund (CIF)</p> <ul style="list-style-type: none"> • IPCC • The UNFCCC-COP • THE Kyoto Protocol • The Clean Development Mechanism (CDM) • The Paris Agreement | <p>At the end of this topic, students will be able to:</p> <ul style="list-style-type: none"> ▪ Learn about the various bodies, policies and frameworks to address issues related to climate change ▪ Know the key roles and responsibilities of key climate change bodies | <p>Short video climate change resilience from YouTube Small group discussions and a summarized presentation of what they have learnt from the video. E.g. What are some of the international policies formed to address climate change?</p> | <p>YouTube videos Posters</p> | <p>Group work where students will summarise the roles of key international climate change policies.</p> |
| <p>Climate change in Sierra Leone and the geography of Sierra Leone</p> <ul style="list-style-type: none"> • Location • Climate • Topography • Vegetation • water • Population • economic and social development • Climatic/ environmental hazards in Sierra Leone- floods, mudslides/landslide, rock falls, dry spells, bush fires, tropical | <p>Students will be able to:</p> <ul style="list-style-type: none"> • Explain about the location of Sierra Leone in Africa and her neighbouring borders, political and administrative boundaries • The physiography, vegetation and climate of Sierra Leone • Common climatic and environmental hazards in Sierra Leone • The population of Sierra Leone and | <p>Discussion to assess pre knowledge about</p> <ul style="list-style-type: none"> – Where is Sierra Leone located and which countries are on its international borders? – What are the main rivers and mountains in the country? – What are the vegetation types and climate of Sierra Leone? – What are the main seasons of Sierra Leone? – Have you noticed any change in the duration of the seasons in Sierra Leone? – If yes why do you think this is happening? <p>Ask students to find out from their grandparents or older people in their</p> | <p>YouTube; Geography Now! Sierra Leone Maps of Sierra Leone showing vegetation, climate</p> <p>A new Geography of Sierra Leone, Gwynne Jones</p> <p>Map of Africa</p> <p>Google earth exploring mortomeh before and after the mudslide YouTube https://www.youtube.com/watch?v=o49Kesn1x2s</p> | <p>Presentation of the map of Sierra Leone showing discussing the topography, climate, vegetation and water resources Presentation of climatic data showing precipitation and temperature from 1950 to present Presentation of findings from investigation of seasons Discussion of student opinions from the YouTube videos</p> |



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| <p>storms, coastal erosion etc</p> | <p>population distribution in major towns</p> | <p>community about their observations in the patterns of the seasons in the 1960s/70s and now. Has there been any change in the harmattan season or has the intensity of rainfall increased or decreased? What are the reasons for that?</p> <ul style="list-style-type: none"> - What are the common environmental hazards in Sierra Leone? - What are the causes of these hazards? | <p>Video of Sierra Leone's mudslide in 2017 on Al Jazeera's channel</p> <p>YouTube videos Interview: climate change a contributor to Sierra Leone disaster - YouTube</p> <p>World affairs channel Land, Environment & Global Justice: Sierra Leone and Around the World - YouTube</p> <p>Plan international Sierra Leone Climate Change - YouTube</p> | |
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Year 3

| Topic/Theme/Unit | Expected learning outcomes | Recommended teaching methods | Suggested resources | Assessment of learning outcomes |
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| <p>Vulnerability and impacts of climate change in Sierra Leone</p> <ul style="list-style-type: none"> Climate scenarios- temperature, precipitation, evaporation, solar radiation Vulnerability (current and future) and impact of major sectors- agriculture, water, health, forests, fisheries, coastal zones | <p>Student will be able to:</p> <ul style="list-style-type: none"> Explain Sierra Leone's current and future vulnerability to climate change making reference to major sectors. Describe how weather patterns have changed over the years in communities and how it is affecting them especially the fishing activities of those at Tombo and/or other locations | <p>Explain to students that due to certain factors, some areas are affected more by climate change than others and they find it hard to cope with these adverse effects. List some areas in Sierra Leone that are vulnerable to climate change- islands, low lying coastal areas etc</p> <p>Field visit to areas such as moa wharf and Tombo, Bonthe island, Pepel, Konakridie etc. Find out whether weather patterns have changed over the years in those communities and how it is affecting them especially the fishing activities</p> <p>Field visits to key ministries like the Ministry of Agriculture, Ministry of water resources, Ministry of marine resources, ministry of Environment to investigate the impacts of climate change</p> | <p>Maps of Sierra Leone showing vulnerable areas to climate change</p> <p>You tube video International Institute for Environment and Development's untold stories of climate change in Sierra Leone https://www.iied.org/published-past-coping-iied-animation-captures-destruction-climate-change-loss-damage-sierra-leone and on YouTube https://www.youtube.com/watch?v=yVvVk2zNSbo and https://www.preventionweb.net/news/loss-and-damage-climate-change-has-pushed-sierra-leoneans-far-beyond-their-ability-adapt</p> <p>World bank's website on climate change in Sierra Leone https://climateknowledgeportal.worldbank.org/country/sierra-</p> | <p>Group presentation of field work Discussion on effects of climate change in coastal communities https://www.youtube.com/watch?v=ONYLTMZMXjU And https://www.youtube.com/watch?v=J0Sy0bo-pVc Causes of climate change in Sierra Leone https://www.youtube.com/watch?v=AjCuPDohmGA Discussion on effects of climate change https://www.youtube.com/watch?v=q26eb-ZPMYI</p> <p>Discussion on this interview https://www.youtube.com/watch?v=2-H5ByECHVg</p> |



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| <p>Greenhouse gas emissions in Sierra Leone Emissions of major GHGs from: energy sector (fuel combustion), industrial processes, agriculture (prescribed burning of savannas and field burning of agricultural residues), land use change and forestry (forest and grassland conversion), waste management</p> | <p>Students will be able to: Explain major sources of greenhouse gas emissions in the country</p> | <p>Field visit to the ministry of environment and the environmental protection agency to find out the methodologies used for calculating GHGs in Sierra Leone, the challenges in collating sources of GHGs and recent data available on GHGs</p> | <p>leone/impacts-sea-level-rise Vanguard paper poster</p> | <p>Presentation from field visit</p> |
| <p>Climate Change Adaptation and Mitigation in key economic sectors in Sierra Leone</p> <ul style="list-style-type: none"> • Agriculture • Fisheries • Water resources • Health • Civil society's role in curbing climate change in Sierra Leone- ENFORAC, Green scenery | <p>Students will be able to:</p> <ul style="list-style-type: none"> • Explain the adaptation and mitigation measures taken to curb climate change by key sectors such as agriculture, health • The role of national adaptation plan (NAP) in achieving a resilient nation. | <p>Field visits to key ministries like the Ministry of Agriculture, Ministry of water resources, Ministry of marine resources, ministry of Environment to investigate the impacts of climate change and the implementation of the country's national adaptation plan.</p> <p>Field visit to an NGOs to find out their work in climate change related issues</p> | <p>YouTube videos on Sierra Leone's National Adaptation Planning Process - YouTube and https://www.youtube.com/watch?v=WUmbOQjwHzw https://www.youtube.com/watch?v=sgVzjEzLWXM https://www.youtube.com/watch?v=K-Rfun-M2I8 Planet Earth poem https://www.youtube.com/watch?v=MY72A_YYwPg</p> | <p>Presentation from visit Discussion of adaptation and mitigation measures currently practiced to combat climate change in Sierra Leone from YouTube videos https://www.youtube.com/watch?v=nn6SOfQFdXk Discussion on local radio drama programmes on climate change like "wata say stone"</p> |