



THE REPUBLIC OF UGANDA  
Ministry of Education and Sports

# ADVANCED SECONDARY CURRICULUM



## GEOGRAPHY SYLLABUS



**NCDC**  
NATIONAL CURRICULUM  
DEVELOPMENT CENTRE

2025



**ADVANCED SECONDARY  
CURRICULUM**

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**GEOGRAPHY  
SYLLABUS**

**2025**



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## FOREWORD

The Ministry of Education and Sports, through the National Curriculum Development Centre (NCDC), aligned the Advanced Level Curriculum with the competency-based Lower Secondary Curriculum (LSC) to ensure a smooth learner transition from lower secondary to advanced level.

The two-year aligned Advanced Secondary Curriculum adopted learner-centered approaches, inquiry-based, and discovery methods. The learning outcomes give the learner hands-on experiences in real-life situations while being cognizant of different learner abilities and learning styles. The syllabus focuses on assessment for learning with emphasis on criterion-referenced assessment. It further provides learners with the opportunity to enhance the 21st-century skills and values that were acquired at the lower secondary level.

This Geography syllabus fosters the practical application of knowledge in areas such as resource utilisation, environmental conservation, disaster management, and crisis response. It promotes Higher-order Thinking Skills (HOTS), including inquiry, creativity, innovation, decision-making, critical thinking, and problem-solving. The syllabus advocates for learner-centred pedagogies that emphasise hands-on experience in real-life situations while catering for diverse learning abilities and styles.

As the Minister responsible for Education, I endorse this syllabus as the official document for teaching and learning **Geography** at the Advanced Level of secondary education in Uganda.



Hon. Janet Kataaha Museveni

**First Lady and Minister of Education & Sports**

## ACKNOWLEDGEMENTS

The National Curriculum Development Centre (NCDC) is indebted to the Government of Uganda for financing the alignment of the Advanced Level Curriculum to Lower Secondary Education in Uganda.

Our gratitude goes to the Ministry of Education and Sports for overseeing the adaptation of the curriculum, the Curriculum Task Force of the Ministry of Education and Sports for the oversight role and making timely decisions whenever necessary, and members of the public who made helpful contributions towards shaping this curriculum.

NCDC is also grateful to Members of Parliament, schools, universities, and other tertiary institutions, the writing panels, and professional bodies, for their input in the design and development of the Adapted A level curriculum. To all those who worked behind the scenes to finalise the adaptation process of this teaching syllabus, your efforts are invaluable.

NCDC takes responsibility for any shortcomings that might be identified in this publication and welcomes suggestions for effectively addressing the inadequacies. Such comments and suggestions may be communicated to NCDC through P. O Box 7002, Kampala, or Email: [admin@ncdc.go.ug](mailto:admin@ncdc.go.ug) or on the Website: [www.ncdc.go.ug](http://www.ncdc.go.ug)



Dr Grace K. Baguma

**Director**

**National Curriculum Development Centre**



## 1.0 INTRODUCTION

The Advanced Secondary Curriculum has been aligned with the Lower Secondary competency-based model for ease of progression of learners from the Lower to Advanced Secondary Level. The alignment is a result of the analysis of the Advanced Level Curriculum published in 2013, to determine whether the content is:

- i) appropriate.
- ii) high-pitched or overloaded.
- iii) covered at lower secondary.
- iv) obsolete.
- v) repeated in different topics and redundant.

The results from the curriculum analysis revealed that there were overlaps of concepts with what was covered at the Lower Secondary, as well as concepts within different topics of the same subject. In addition, a number of syllabuses had content that is no longer necessary for today's contemporary society and the 21st century.

### 1.1 Changes in the Curriculum

The alignment of the A -level Curriculum to that of the Lower Secondary led to changes in the pedagogies of learning from a knowledge- and objective-based, to an integrated and learner-centred competency-based approach. The adapted syllabus, therefore, is a result of rationalising, integrating, and merging content with overlaps and similar skills, dropping topics that had been studied at Lower Secondary, or are no longer critical and relevant for the current learning needs, while upgrading those that were of low competencies to match with the advanced level. The programme planner details the learning progression derived from the learning outcomes. The detailed syllabus section unfolds the learning experiences with corresponding assessment strategies.

This **Geography** syllabus is part of the Advanced Secondary Curriculum. The teacher is encouraged to read the whole syllabus before planning your teaching programme, since many topics have been merged, upgraded, or removed. While aligning this syllabus, efforts were made to ensure a smooth progression of concepts from the Lower Secondary Level, adapting topics and content with familiar features that are of value to the learner and society. In addition, the process of developing this syllabus document removed what was considered obsolete, high pitched as well as content overlaps and overloads.

### 1.2 Classroom-based Assessment

This syllabus requires classroom learning to be experiential, through the suggested learning activities for the acquisition of the learning outcomes. This is the gist of a learner-centred and activity-based approach to learning, which emphasises the acquisition of required competencies. Formative assessment in Geography will focus on the acquisition of knowledge and skills, through performance of the learning activities. The learning activities sprout from the learning outcomes, which are evidenced by acquiring and demonstrating the application of the desired skills, to show that learning has taken place. The sample assessment strategies have been provided to guide the teacher on classroom-based assessment.

The teacher can develop more assessment strategies based on the same principles of observation, conversation, and product, for the acquisition of the desired knowledge, skills, values, and attitudes. (See detailed syllabus)

### **1.3 Learners with Special Educational Needs**

The Advanced Secondary Curriculum is designed to empower all learners, including those with Special Educational Needs (SEN), to reach their full potential and contribute meaningfully to society. By incorporating inclusive strategies, the curriculum ensures equitable access to high-quality learning opportunities while maintaining academic standards. It emphasises an inclusive learning environment that supports the diverse needs of learners with SEN, enabling them to succeed alongside their peers.

This subject promotes diversity, equity, and holistic development by providing necessary support to learners with SEN throughout their educational journey. Geography exemplifies these principles by ensuring that every learner has an opportunity to succeed academically and socially.

## 1.4 Generic Skills

Generic skills are embedded within all subjects and are essential for learning and workforce readiness. These skills enable learners to engage with the entire curriculum effectively and prepare them for lifelong learning. These skills equip learners with the ability to adapt to change and navigate life's challenges in the 21st century.

**The key generic skills include:**

# 1

### Critical thinking and problem-solving

- i) Planning and carrying out investigations
- ii) Sorting and analysing information
- iii) Identifying problems and proposing solutions
- iv) Predicting outcomes and making reasoned decisions
- v) Evaluating different solutions

### Co-operation and Self-Directed Learning

- i) Working effectively in diverse teams
- ii) Interacting effectively with others
- iii) Taking responsibility for own learning
- iv) Working independently with persistence
- v) Managing goals and time

# 2

# 3

### Creativity and Innovation

- i) Using imaginations to explore possibilities
- ii) Working with others to generate ideas
- iii) Suggesting and developing new solutions
- iv) Experimenting with innovative alternatives
- v) Looking for patterns and making generalisation

### Communication

- i) Listening attentively and with comprehension
- ii) Talking confidently and explaining ideas/opinions clearly
- iii) Reading accurately and fluently
- iv) Writing and presenting information coherently
- v) Using a range of media to communicate ideas

# 4

# 5

### Mathematical Computation

- i) Using numbers and measurements accurately
- ii) Interpreting and interrogating mathematical data
- iii) Using mathematics to justify and support decisions

### Information and Communication Technology (ICT) Proficiency

- i) Using technology to create, manipulate and process information
- ii) Using technology to collaborate, communicate and refine work

# 6

# 7

### Diversity and Multicultural Skills

- i) Appreciate cultural diversity
- ii) Respectfully responding to people of all cultures
- iii) Respecting positive cultural practices
- iv) Appreciating ethnicity as a cradle for creativity and innovation

### 1.5 Cross-Cutting Issues

Cross-cutting issues are integrated throughout the curriculum to provide learners with a broader understanding of real-world challenges. These include:

- i) Environmental awareness
- ii) Health awareness
- iii) Life skills development
- iv) Inclusivity and mixed abilities
- v) Socio-economic challenges
- vi) Citizenship and patriotism

These issues are infused within different subjects to foster holistic learning and responsible citizenship.

### 1.6 Values

The curriculum is guided by core values derived from Uganda's National Ethical Values Policy (2013). These include:

- i) Respect for humanity and the environment
- ii) Honesty; uphold and defend the truth at all times
- iii) Justice and fairness in dealing with others
- iv) Hard work for self-reliance
- v) Integrity; moral uprightness and sound character
- vi) Creativity and innovation
- vii) Social responsibility
- viii) Social harmony
- ix) National unity
- x) National consciousness and patriotism

These values are embedded in learning outcomes rather than directly taught, ensuring their development throughout the education process.

### 1.7 ICT integration

The integration of ICTs into teaching and learning is strongly encouraged in this A-level adapted curriculum. ICT enhances the implementation of competency-based learning by fostering learner engagement, creativity, and lifelong learning. Teachers are encouraged to use technology to create interactive content, such as digital simulations and videos, to illustrate abstract or complex concepts effectively. Integrating ICT not only enhances the learning experience but also equips learners with essential digital skills for the 21st century.

ICT teachers should endeavour to assist other subject teachers in making the ICT integration process a reality. The table below shows a sample of suggested ICT tools that may be applied to given tasks.

Sample Task in the Syllabus	Suggested ICT Tool
Fieldwork	Use of cameras to take photos and record videos
Locate places on a map	Use digital maps such as Google Maps or an equivalent application.
Presentation in class	Use presentation applications or online presentation tools like Canva
Search for keywords and meanings	Use an online dictionary or search online

Make drawing/graphics	Use drawing tools like Draw.io or publishing software/Word processor
Roleplay, narrations	Use audio and video recordings
Demonstrations	Use audio/video recordings, models, simulations, or virtual labs
Analyse and present data	Use spreadsheet software or any other analytics tools
Group discussions	Mind mapping software
Search for extra reading materials	Download files from the Internet from academic Databases
Writing equations and formulae	Use equation editors like MathType
Carry out academic search/research	Use the Internet, AI models, and other academic applications like "Encarta", "Britannica", etc.
Collaborate with others across the world	Form learning networks with blogs, social media, emails, and videoconferencing tools like Zoom, MS Teams, Webex, Google Meet or any other networking application.

### 1.8 Projects

Project-based learning is a vital component of this curriculum, with integrated projects in various topics. Teachers should guide learners in selecting relevant projects linked to their local environment while ensuring alignment with learning outcomes. These projects provide hands-on experiences that enhance understanding and application of geographical concepts.

### 1.9 Aims of Secondary Education

The aims of secondary education in Uganda are to:

- i) instil and promote national unity, an understanding of the social and civic responsibilities, strong love and care for others and respect for public property, as well as an appreciation of international relations and beneficial international co-operation.
- ii) promote an appreciation and understanding of the cultural heritage of Uganda including its languages.
- iii) impart and promote a sense of self discipline, ethical and spiritual values, personal and collective responsibility and initiative.
- iv) enable individuals to acquire and develop knowledge and an understanding of emerging needs of society and the economy.
- v) provide up-date and comprehensive knowledge in theoretical and practical aspects of innovative production, modern management methods in the field of commerce and industry and their application in the context of socio-economic development of Uganda.
- vi) enable individuals to develop basic scientific, technological, technical, agricultural and commercial skills required for self-employment.

- vii) enable individuals to develop personal skills of problem-solving, information-gathering and interpretation, independent reading and writing, self-improvement through learning and development of social, physical and leadership skills such as those obtained through games, sports, societies and clubs.
- viii) lay the foundation for further education.
- ix) enable the individual to apply acquired skills in solving problems of community, and to develop a strong sense of constructive and beneficial belonging to that community.
- x) instil positive attitudes towards productive work and strong respect for the dignity of labour and those who engage in productive labour activities.
- xi) develop a positive attitude towards learning as a lifelong process.

### **1.10 Aims of the Advanced Secondary Curriculum**

- i) To adopt a competency-based learning approach.
- ii) To develop holistic education for both personal and national development guided by clear, shared values.
- iii) To develop key skills which are essential to work and life and promote lifelong learning.
- iv) To adopt an integrated approach to learning that develops the ability of learners to apply learning.
- v) To improve assessments by incorporating school-based assessment into End of Cycle Assessment.
- vi) To foster learner participation and engagement with the community.
- vii) To prepare the learner for further education.

### **1.11 Rationale for Teaching Geography at Advanced Level**

The Advanced Level Geography syllabus aims to:

- i) equip learners with skills necessary for harnessing natural resources sustainably.
- ii) develop learners' ability to think systemically, enabling them to appreciate the complex relationships between human actions across different parts of the world and their impact on local and global environments.
- iii) foster learners' critical thinking and the ability to present structured, coherent and evidence-based arguments.
- iv) enhance learners' ability to interpret the world from a spatial perspective.
- v) cultivate learners' understanding of personal and collective responsibility in addressing contemporary challenges, including environmental, health and socio-economic crises.

- vi) build learners' capacity to interpret and evaluate primary and secondary, qualitative and quantitative data, enabling them to draw well-reasoned conclusions about geographical phenomena.
- vii) prepare learners for further studies and gainful employment in fields that require a strong foundation in geography and geographic methods of analysis and reasoning.

## 1.12 Subject Overview

The areas of study in the syllabus have been reorganised to create an adapted version. The subject areas include:

### 1. Physical Geography

Learners are expected to:

- i) develop knowledge and understanding of the Earth, its relief and selected geomorphic processes that are ever-modifying it.
- ii) analyse atmospheric processes, weather patterns, and climate, and assess their impact on life and development on Earth.
- iii) demonstrate skills of collecting, analysing, communicating and using data about geomorphic and atmospheric processes and their impact on physical and human environments at different scales using a range of sources, geographic methods, techniques and tools.
- iv) appreciate the need for managing natural environments sustainably to benefit human beings and the entire ecosystems to which they belong.
- v) demonstrate an understanding of the sustainable methods for managing natural environments to support human well-being and ecological balance.

### 2. Human Geography

Learners are expected to:

- i) investigate the complex relationships between population change over space and time and human capacity to exploit and mobilise resources in their environment for survival.
- ii) develop knowledge and understanding of global development, including the natural, social, political, and historical factors contributing to disparities, particularly between the Global North and South.
- iii) apply a range of geographical methods, techniques, and tools to collect, manage, interpret, communicate, and utilise data related to various aspects of human geography.
- iv) recognise the importance of sustainable management of production systems, such as agriculture and energy, and the consequences of mismanagement of those systems on human societies.

### 1.13 Time Allocation

Learners shall have nine (9) periods per week from Senior Five to Senior Six.

### 1.14 Suggested Approaches to Teaching and Learning Geography

The suggested approaches enhance learning and empower teachers to support learners in achieving the learning outcomes for each topic. This requires teachers to collaborate with learners by guiding, supporting, and supervising them throughout the learning process. These approaches include:

- i) Inquiry-Based Learning: Learners investigate topics through research driven by their interests and solve problems using a series of questions and scenarios, enhancing critical thinking, communication, and research skills.
- ii) Experiential Learning: Learners actively participate in hands-on experiences during research and develop understanding through reflection on their actions.
- iii) Problem and Project-Based Learning: Learners find solutions to real-world problems through field investigations, research, and project work.
- iv) Using and Creating Case Studies: Learners analyse and discuss real-world scenarios at local, regional, and global levels to deepen their understanding of geographical concepts.
- v) Discovery Learning: Learners construct their own knowledge through active participation, exploration, and inquiry.
- vi) Integration of Geographic Skills: Learners acquire and apply key geographical skills, including mapping and map interpretation, photograph analysis, and statistical evaluation, as they engage with concepts across all topics.

### 1.15 Programme Planner`

Class/Term	Topic	Sub-topic		Periods
Senior Five Term 1	1. The Structure of the Earth	1.1	The External Structure of the Earth	6
		1.2	The Internal Structure of the Earth	6
	2. The Origin of Continents and Ocean Basins	2.1	The Continental Drift Theory	18
		2.2	Effect of Continental Drift on Relief and Landforms	16
	3. World Development	3.1	What is Development?	2
		3.2	Indicators of Development	8
		3.3	Causes of Inequalities in World Development	4
		3.4	Sustainable Development and How it can be Achieved	6
<b>Total</b>				<b>66</b>
Senior Five Term 2	4. Agriculture and Development	4.1	The Role of Agriculture in Development	8
		4.2	Subsistence Agriculture	18
		4.3	Commercial Agriculture	16
		4.4	Agricultural Modernisation	15



	5. Soil Development and Management	5.1	Components and Properties of Soil	12	
		5.2	Soil Formation	8	
		5.3	Soil Profile and Soil Catena	12	
		5.4	Soil Productivity	9	
		5.5	Soil Degradation and Conservation	10	
<b>Total</b>				<b>108</b>	
Senior Five Term 3	6. Population and Development	6.1	Distribution and Density of Population	8	
		6.2	Population Growth and Size	6	
		6.3	Population Structure	8	
		6.4	Population Migrations	16	
	7. Drainage and the Role of Rivers in Shaping the Landscape	7.1	The Drainage System of Uganda	4	
		7.2	Evolution of Uganda's Drainage	8	
		7.3	The Role of Rivers in Shaping the Landscape	16	
		7.4	Importance of Drainage in Development	4	
	8. Energy Production	8.1	Major Energy Resources	6	
		8.2	World Energy Production and Consumption	12	
		8.3	Factors Affecting Development of Energy Resources	6	
		8.4	Environmental Impact of Energy Production	8	
		8.5	Sustainable Utilisation of Energy Resources	6	
	<b>Total</b>				<b>108</b>
	Senior Six Term 1	9. Climatology and Meteorology	9.1	The Nature of the Atmosphere	6
9.2			Solar Radiation and Atmospheric Temperature	16	
9.3			Atmospheric Humidity	9	
9.4			Atmospheric Pressure & Wind Systems	14	
9.5			Air Masses	9	
9.6			Ocean Currents	9	
9.7			Global climatic changes	12	
10. Settlement and Urban Growth		10.1	Main Types and Distribution of Settlement	9	
		10.2	Rural Settlement	9	
		10.3	Urban Settlement	9	
		10.4	Problems of Urban Growth	4	
		10.5	Land Use Planning and Control of Urban Growth	2	
<b>Total</b>				<b>108</b>	
Senior Six Term 2	11. Slope Development	11.1	Theories of Slope Development	14	
		11.2	Mass Wasting; Types and Processes	16	

		11.3	Effects of mass wasting	6
		11.4	Measures to control mass wasting	6
	12. Problems of Food Supply	12.1	Trends in World Food Supply	8
		12.2	Food Shortage in Developing Countries	10
		12.3	Addressing Food Shortages	6
	13. Lake and Sea Coasts	13.1	Waves and Their Nature	8
		13.2	Landforms Due to Wave Action Along the Coast	18
		13.3	Lake and Sea Level Changes	8
		13.4	Influence of Coasts on Human Activities	8
<b>Total</b>				<b>108</b>
Senior Six Term 3	14. Utilisation and Conservation of Natural Resources	14.1	Resource and their Nature	4
		14.4	Sustainable Utilisation of Wetlands	20
		14.3	Environmental Degradation and Conservation	24
<b>Total</b>				<b>48</b>

### 1.16 Note to users:

Each topic has a competency - a broad statement outlining what the learner is expected to achieve by the end of the topic. This competency is further broken down into learning outcomes, with corresponding suggested learning activities and sample assessment strategies, as presented in the three columns below.

Learning Outcomes	Suggested Learning Activities	Sample Assessment Strategies
A statement describing the knowledge, understanding, skills, generic skills, values, and attitudes that learners are expected to acquire by the end of the topic. Each learning outcome is coded as; <b>k (knowledge), u (understanding), s (skills), gs (generic skills), &amp; v/a (values and attitudes)</b> to guide the teacher on key areas of focus during the lesson.	Engaging hands-on and minds-on activities that help learners to achieve the intended learning outcomes, including the development of generic skills and values. These activities are designed to enable learners to Discover, Explain, Apply and Analyse ( <b>DEAA</b> ) as they actively participate in knowledge construction.	Opportunities for assessment within the learning process that is, during and after the lesson.

The learning activities and assessment strategies in the syllabus are “suggested” and “sample” in nature, and are not exhaustive. Teachers are encouraged to develop additional learning activities and assessment strategies based on the learning outcomes. Furthermore, teachers are free to adapt the suggested learning activities to suit their respective learning environments and to accommodate learners with Special Educational Needs (SEN).

## 2.0 DETAILED SYLLABUS

### Senior Five Term One

#### TOPIC 1: The Structure of the Earth

**Duration: 12 Periods**

**Competency:** The learner demonstrates appreciation of the structure of the Earth and its influence on geomorphic processes and formation of some natural resources by examining the properties of each of its layers to better understand the geologic foundation of human development.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Assessment Strategies</b>
a) analyse the Earth by examining its nature, shape, and external features as a basis for exploring its internal structure (u, gs).	<p><b>The External structure of the earth</b></p> a) Through questioning, guide learners to revise the nature of the Earth which they learnt at Lower Secondary b) In groups, learners study the globe or a drawn 3-D model of the Earth from the Internet, and use the information gathered to describe the external/outer structure of the Earth c) Groups make presentations and their ideas feed into a whole class discussion d) Guide learners to reach an agreement on the composition of the external/outer structure of the Earth: Lithosphere, Hydrosphere, Biosphere, and Atmosphere	a) Observe learners as they work in groups, focussing on individual participation, contribution to group ideas, and ability to work with persistence. b) Listen to learners' submissions about the nature of the Earth and evaluate their level of awareness and how logical their ideas are in relation to the four main external layers of the Earth. c) During presentations, probe groups to explain their ideas, noting how well group members can work together to defend the group position using evidence from the globe or 3-D model.
b) assess the significance of the internal properties of the Earth in understanding the evolution of tectonic landforms and some natural resources (k, u, gs, v/a).	<p><b>The internal structure of the Earth</b></p> a) Learners brainstorm how scientists can find out about the interior of the Earth. b) In groups, learners analyse texts and maps or watch videos about earthquakes, faulting and volcanic eruptions to find clues about the interior of the Earth. They make write-ups and share their findings through presentations.	a) Observe learners working in groups, noting how effectively they interact, sort, and analyse information. b) Ask learners to explain their ideas about: using the pattern of shock waves produced by earthquakes, material erupted by volcanoes, meteorites, the Earth's magnetic field and other clues to find out about the interior of the Earth.

	<p>c) Learners make a cross-section of an avocado, pear, or study a cross-section of the Earth. They draw diagrams to show the internal structure of the Earth and write notes to describe it.</p> <p>d) Learners discuss the properties of each layer and how those properties influence the occurrence of tectonic processes (e.g. volcanicity, faulting, folding, and warping) and resultant landforms.</p> <p>e) Learners investigate the relationship between the internal structure of the Earth and the evolution of some of the natural resources on Earth.</p> <p>f) In groups, learners create a concept map linking the properties of the internal layers of the Earth, geomorphic processes; and their impact on humans. Groups share their concept maps for further discussion.</p>	<p>Assess their ability to talk confidently and explain ideas clearly.</p> <p>c) Evaluate learners' concept maps, focusing on how well and how logically they can bring out the relationship between the nature of the internal layers of the Earth and the formation of tectonic landforms; and the natural resources associated with the landforms.</p>
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## TOPIC 2: The Origin of Continents and Ocean Basins

**Duration:** 34 Periods

**Competency:** The learner demonstrates an understanding of the role of theories in exploring geomorphic concepts by critically evaluating the continental drift theory based on scientific evidence to inform further geographical inquiry and to acquire problem-solving skills.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Assessment Strategies</b>
a) evaluate the continental drift theory using scientific evidence (u, v/a).	<p><b>The Continental Drift theory</b></p> <p>a) Learners study an atlas map/wall map/textbook map of the world to find out what continents and ocean basins are. They discuss and reach an agreement on the meaning of continents and ocean basins.</p> <p>b) Demonstrate the drifting of continents using jig-saw pieces of the world map or any other method.</p>	a) Observe learners as they discuss the meaning of continents and ocean basins. Note their ability to construct meanings from investigations, and how well they respect divergent views.

	<ul style="list-style-type: none"> <li>c) Individually, learners write brief notes to describe their observations and explain their understanding of continental drift.</li> <li>d) Learners read printed or digital texts or watch a video on continental drift to deepen their knowledge of the concept.</li> <li>e) Learners brainstorm and suggest the forces responsible for the drifting of continents.</li> <li>f) Prompt learners to elicit more responses, fostering deeper reasoning and understanding.</li> <li>g) Provide a world map or maps that show evidence of continental drift and guide learners in exploring the evidence. Individually, learners record their findings and share them in a whole-class discussion.</li> <li>h) Use modelling techniques, sketch maps, and diagrams to help learners understand key evidence of continental drift, emphasising concepts from natural sciences such as Geology, Geophysics, Botany, and Palaeoclimatology.</li> <li>i) Individually, learners form their own opinions and conclusions about the observable similarities and potential connections between nearby continents and their associated islands.</li> </ul>	<ul style="list-style-type: none"> <li>b) Prompt learners to explain their submissions on the forces responsible for the drifting of continents, focusing on their ability to relate forces to the properties of the core, mantle and the crust.</li> <li>c) Evaluate learners' findings about evidence of continental drift for accuracy and coherence of information and ability to use relevant sketch maps and diagrams to illustrate their ideas.</li> </ul>
<ul style="list-style-type: none"> <li>b) predict the future shapes, sizes and positions of world continents and landforms basing on the knowledge of the continental drift theory (u, s, v/a).</li> <li>c) demonstrate appreciation of the role of scientific inquiry in</li> </ul>	<p><b>Effects of Continental Drift on Relief and Landscape</b></p> <ul style="list-style-type: none"> <li>a) In groups, learners analyse texts and photographs that illustrate the effects of continental drift on relief and landforms.</li> <li>b) Groups document how continental drift contributed to the formation of these features, draw diagrams to illustrate their formation, and describe their characteristics, citing examples from Uganda, East Africa, and other parts of the world.</li> <li>c) Groups present their findings, which contribute to a whole-class discussion.</li> <li>d) Guide learners to understand the relationship between the movement of continents and the formation of structural landforms through faulting, warping, folding, and igneous activity.</li> <li>e) Using knowledge of continental movement and evidence of continental drift, learners speculate about the future shapes, sizes, and</li> </ul>	<ul style="list-style-type: none"> <li>a) Evaluate group presentations about the effects of continental drift on relief and landscape, noting how well they bring out the cause-effect relationships relevant to the context.</li> <li>b) Ask learners to explain their predictions about the future shapes, sizes, and positions of world continents. Evaluate how their predictions build on what has been learnt.</li> </ul>

<p>understanding geomorphic processes and their influence on the way we live on earth (u, gs, v/a).</p>	<p>positions of world's continents. They write down their ideas and draw maps to illustrate them.</p> <p>f) In groups, learners create a concept map that links continental drift, geomorphic processes, resultant landforms, and their potential impact on human activities. Group concept maps contribute to a whole-class discussion.</p> <p>g) Learners research two case studies of major landforms related to continental drift and their effects on human activities and development (e.g., the Himalayas, Atlas Ranges, the Great African Rift valley, the Mid-Atlantic Oceanic Ridge). They write a report and propose strategies for minimising natural hazards to communities living on or near the landforms.</p>	<p>c) Assess learners' maps and diagrams illustrating future continents for creativity, originality and understanding of continental drift.</p>
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### TOPIC 3: World Development

**Duration:** 20 Periods

**Competency:** The learner demonstrates an understanding of development by analysing spatial development patterns, development priorities, and factors influencing development, while proposing interventions to address disparities in development at the country or regional level.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Assessment Strategies</b>
<p>a) form opinions about world development pattern through analysing statistics, maps, and other relevant information (s, gs, v/a).</p>	<p><b>What is development?</b></p> <p>a) Learners brainstorm the meaning of development.</p> <p>b) In groups, learners analyse the map showing the pattern of world development, write down their findings, and make presentations. Group ideas contribute to a whole-class discussion.</p> <p>c) Guide learners to agree on the definitions of development and what constitutes development.</p>	<p>a) Listen to learners' submissions, noting their ability to use appropriate terms in relation to development.</p> <p>b) Observe learners as they discuss in groups, focussing on teamwork and ability to express their ideas logically and fluently.</p> <p>c) Prompt learners to explain their views about world development, focussing on their ability to look for patterns and make generalisations.</p>
<p>b) analyse the level of development in the local area and home</p>	<p><b>Indicators of Development</b></p>	<p>a) Observe learners as they discuss why Uganda and other African countries are</p>

<p>country by applying various indicators used to measure development to appreciate community and government efforts to improve the lives of the people (s, gs, v/a).</p> <p>c) predict the future trend of development in Uganda and other countries using relevant information (gs, v/a).</p>	<p>a) In groups, learners discuss factors they use to describe development in their community and country.</p> <p>b) Groups analyse texts, statistics, and graphs about development to validate their ideas regarding the indicators used to measure development.</p> <p>c) Learners discuss why Uganda and other African countries are considered developing countries.</p> <p>d) Using statistics and maps, learners critically evaluate the existing measures of development, such as Gross National Product per capita (GNP) and the Human Development Index (HDI).</p> <p>e) In a whole-class discussion, learners suggest suitable development strategies for Uganda and/or Africa to achieve fast, overall human development.</p> <p>f) Learners speculate on Uganda’s or another country’s level of development in 20 years, based on current development indicators and policies.</p>	<p>said to be developing countries. Note their ability to relate the ranking to the UN development indicators and to argue out issues objectively.</p> <p>b) Observe learners as they analyse statistics, maps and graphs, focusing on how well they interpret and interrogate mathematical data to derive meanings and conclusions.</p> <p>c) In conversation, ask learners to defend their submissions about suitable development strategies, noting their ability to use evidence to support their arguments.</p> <p>d) Assess learners’ write-ups about the future level of development for Uganda or another country for logical flow of ideas and ability to make generalisations following an existing pattern.</p>
<p>d) analyse the conditions which may slow down or totally affect holistic regional or national development as a basis for planning proper management and utilisation of resources (u, v/a).</p>	<p><b>Causes of Inequalities in World Development</b></p> <p>a) In groups, learners discuss why development disparities exist in their country and between countries and regions, and share their ideas using a gallery walk.</p> <p>b) Through questioning, help learners to understand the economic, social, political and environmental factors that may, individually or collectively, lead to inequalities in development. Explain their ideas further for clarity.</p>	<p>a) Observe learners as they account for development disparities in their country and between countries and regions. Pay attention to how they relate the disparities to historical and current factors.</p> <p>b) As learners respond to oral questions, assess their ability to articulate ideas logically, confidently, and clearly.</p>

<p>e) propose a suitable development strategy for Uganda through applying the knowledge of sustainable development models (u, gs, v/a).</p>	<p><b>Sustainable development and How it Can be Achieved</b></p> <p>a) Learners search using the Internet or textbooks or other sources for information on sustainable development. They write their findings, share reports, and critique each other's work. As a class, learners agree on the meaning of sustainable development.</p> <p>b) Guide learners to explore how sustainable development leads to improvement in people's:</p> <ol style="list-style-type: none"> <li>i) standard of living for the current and future generations.</li> <li>ii) quality of life, including a healthy environment.</li> </ol> <p>c) They write down key points from the discussions and explanations.</p> <p>d) Individually, learners research case studies—one from a developing country (e.g. Ladakh in India) and another from a developed country—to analyse successful sustainable development initiatives. Learners then share their findings in a whole-class discussion.</p> <p>e) Learners simulate a sustainable development summit where they take on roles as stakeholders, and discuss policies and trade-offs for achieving sustainable development goals (SDGs) in Africa.</p> <p>f) Learners carry out a project on assisting their home district or country to achieve sustainable development.</p>	<p>a) Observe learners as they present and critique each other's work, focusing on their ability to accept feedback and appreciate criticism.</p> <p>b) Evaluate learners' research reports on the use of credible sources and suitability of the chosen case studies.</p> <p>c) Ask learners to explain the lessons their communities and Uganda can learn from the two case studies. Note their ability to sort and analyse information, while logically relating case studies to local contexts.</p> <p>d) Assess learners' project work at every stage of development paying special attention to their ability to:</p> <ol style="list-style-type: none"> <li>i) suggest and develop solutions to problems.</li> <li>ii) try out innovative alternatives.</li> <li>iii) evaluate different solutions.</li> <li>iv) use a range of media to communicate ideas.</li> <li>v) take responsibility for own learning.</li> </ol>
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## Senior Five Term Two

### TOPIC 4: Agriculture and Development

**Duration:** 57 Periods

**Competency:** The learner gives written or oral advice to a certain community or country on appropriate farming types and techniques to be adopted to promote development through appraising the different types and methods of farming.

Learning Outcomes The learner should be able to:	Suggested Learning Activities	Sample Assessment Strategies
a) evaluate plans and strategies aimed at promoting agriculture in Uganda and other developing countries (s, gs, v/a).	<p><b>The Role of Agriculture in Development</b></p> a) Through questioning, guide learners to understand the meaning and broad types of agriculture: arable and livestock farming. b) In groups, learners identify local agricultural practices they are familiar with. Groups discuss and evaluate the contribution of agriculture to the development of Uganda, presenting both the advantages and disadvantages. c) Groups make presentations, and their ideas contribute to a whole-class discussion. d) Learners search textbooks, magazines, newspaper articles, or the Internet to analyse two case studies—one from a developing country and another from a developed country—comparing the importance of agriculture in their economies. Learners write and present reports. e) Learners debate whether African countries should invest more or less in agriculture to achieve faster economic development and improved human welfare.	a) Prompt learners to explain their ideas on the meaning and types of agriculture. Note how well they can work as a team to generate ideas. b) Observe learners during group presentations, focusing on clarity, confidence, and ability to respond to questions. c) Assess learners' reports about case studies for accuracy of information, coherence of ideas and maturity of analysis. d) Observe learners during the debate, noting their ability to defend their points of view and respect for views at variance.

b) demonstrate an understanding of subsistence farming by articulating its types, characteristics and challenges affecting it (u, s, gs).

**Subsistence Agriculture**

- a) Through questioning, guide learners to explore the types of crops and animals raised by farmers in their community and other parts of Uganda, as well as the main reasons for raising each of them. Ask: *Do most farmers in Uganda grow crops and keep animals for home use or for sale?* Probe learners to provide reasons for their responses.
- b) In groups, learners analyse texts, printed, or digital photographs, and, if possible, videos about subsistence farming. They explore the main types and characteristics of subsistence farming and make presentations to share their findings.
- c) Learners examine climate statistics and other information about typical farmers' annual activities in a subsistence farming community, and draw a circular graph or farmer's calendar to represent it.
- d) Learners interpret the farmers' calendar they have drawn, pointing out the salient features of farming in the area.
- e) Through questioning and discussion, guide learners to reach an agreement on the meaning and general characteristics of subsistence farming.
- f) Individually, learners summarise key ideas about subsistence farming in their notebooks.

- a) Observe learners as they present their responses, focusing on their ability to talk confidently and explain ideas clearly.
- b) Observe learners as they engage with texts, photographs and videos, focusing on their ability to sort and analyse information.
- c) Assess learners' statistical drawings for ability to use numbers and measurements accurately.
- d) Listen to learners' description of farming activities in the subsistence farming community. Note how well they can relate farm activities to the weather pattern.

	<p><b>Challenges facing subsistence agriculture</b></p> <p>a) Learners conduct a fieldwork study to investigate subsistence farming in the local area. They use a Problem Tree Analysis to identify key challenges faced by subsistence farmers in the area and compile a report. Learners present their individual reports which contribute to a whole-class discussion.</p> <p>b) In groups, learners analyse textbook extracts, printed or digital photographs, newspaper articles and other sources to deepen their understanding of the challenges affecting subsistence farming. They write up their findings.</p> <p>c) Through discussion, guide learners to harmonise their findings from the primary and secondary sources to concretise their understanding of the challenges faced by subsistence farmers.</p>	<p>a) Observe learners as they collect data during the fieldwork study. Note their ability to apply data collection techniques and to work independently with persistence.</p> <p>b) In a conversation, ask learners to explain challenges faced by subsistence farmers in the area. Note how deep their understanding is and how logical their explanations are.</p> <p>c) Evaluate learners' Problem Tree analyses for accuracy and connection to local realities.</p> <p>d) Assess learners' fieldwork reports for the accuracy and completeness of data analysis, ensuring they clearly present findings, interpret trends, and establish cause-and-effect relationships. Evaluate the coherence, depth of explanation, and connection to real-world agricultural challenges.</p>
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a) evaluate policies and strategies aimed at improving subsistence agriculture in Uganda and other countries in order to select the most feasible options for addressing the challenges faced by farmers (u, s, gs, v/a).

**Improving Subsistence Agriculture**

- a) In groups, learners analyse digital or printed extracts of policies and strategies that have been put in place to improve subsistence agriculture in Uganda such as National Agricultural Advisory Services Programme (NAADS), Operation Wealth Creation (OWC), National Agriculture Policy, Agro Industrialisation Policy, The 4-Acre Development Model.
- b) Individually, learners carry out library or online research to analyse two case studies of countries or regions with successful interventions to improve subsistence farming and compare their findings with efforts so far made in Uganda.
- c) Learners summarise lessons which Uganda can learn from the case study areas and share their idea.
- d) Learners design a clean sheet plan or manifesto for addressing the problems and challenges faced by farmers in the local community or other parts of Uganda.

- a) Observe learners in groups as they analyse policies and strategies aimed at improving subsistence agriculture in Uganda and other countries. Note their ability to interrogate and appraise government policies and interventions.
- b) In a conversation, ask learners to explain the lessons Uganda can learn from the case study areas, noting how well they relate lessons to challenges facing Uganda subsistence farmers.
- c) Evaluate learners' plan or manifesto for addressing the problems and challenges faced by farmers for ability to identify problems and ways forward, originality and feasibility of the suggested interventions.

<p>a) propose a suitable type of commercial agriculture to be adopted in a given locality based on the prevailing conditions to promote societal transformation (u, gs, v/a).</p>	<p><b>Commercial Agriculture</b></p> <p>a) Learners brainstorm the crops, animals, and animal products in Uganda produced both for local and external markets.</p> <p>b) In pairs, learners draw a table to divide the crops and crop products into traditional and non-traditional cash crops.</p> <p>c) Collaboratively, learners find an answer to the question, “Whose traditional cash crops are they?”</p> <p>d) Through explanation, guide learners to understand the origin of the idea of traditional cash crops.</p> <p>e) Learners study statistics of Uganda’s agricultural exports for the past 10 years and draw graphs to analyse the trends and relative importance of the export items.</p> <p>f) Through questioning, guide learners to understand and agree on the meaning of commercial agriculture.</p> <p>g) Learners analyse texts, printed or digital photographs, documentaries, and topographical maps of selected commercial farming areas to identify the types, characteristics, and factors influencing commercial agriculture.</p> <p>h) Through guided discussion, learners differentiate between intensive and extensive commercial agriculture, including their respective sub-types.</p> <p>i) Learners research and identify examples of each type of commercial agriculture in Uganda and other parts of the world.</p>	<p>a) Assess research reports for comprehensiveness and the relevance of suggested commercial agriculture types.</p> <p>b) Observe planning and presentation sessions, focusing on the depth of analysis and clarity of arguments.</p> <p>c) Evaluate maps and written proposals for alignment with the prevailing conditions of the selected locality.</p>
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	<p><b>Advantages and Disadvantages of Commercial Agriculture</b></p> <p>a) In pairs, learners conduct library or online research on the advantages and disadvantages of commercial agriculture. They compile a report and present their findings to the rest of the class, contributing to a whole-class discussion.</p> <p>b) Through guided questioning and explanation, help learners to reach an agreement on the advantages and disadvantages of commercial agriculture. Pairs refine their reports based on the discussion.</p> <p>c) Learners carry out a project on promoting commercial farming in a selected area to improve the welfare of the local community.</p>	<p>a) Observe learners during discussions and presentations, noting their ability to:</p> <p>b) communicate ideas confidently and clearly.</p> <p>c) listen actively and demonstrate comprehension.</p> <p>d) accept and respond constructively to criticism.</p> <p>e) Evaluate pair reports for accuracy of geographic facts, depth of understanding, and logical flow of ideas.</p> <p>f) Assess learners' project work at every stage, focusing on their ability to:</p> <p>i) identify challenges and propose viable solutions.</p> <p>ii) critically evaluate different approaches to problems-solving.</p> <p>g) Use a range of media to effectively communicate ideas.</p>
<p>a) evaluate programmes and policies aimed at modernising agriculture in Uganda and other countries to make informed decisions about transforming farming communities (v/a).</p> <p>b) form opinions about the adoption of western-</p>	<p><b>Agricultural Modernisation</b></p> <p>a) In groups, learners analyse photographs, text extracts, newspaper articles, and other sources of information about modern agriculture to identify its salient features. Groups share their ideas using the jigsaw technique.</p> <p>b) In a whole-class discussion, learners explain what they understand by modern agriculture. They cite</p>	<p>a) Observe learners as they engage with the different sources of information about modern agriculture. Focus on how well they interpret photographs, sort, and analyse secondary information.</p> <p>b) Probe learners as they explain the meaning of</p>

<p>type farming techniques to improve agricultural productivity in Uganda and other developing countries (v/a).</p>	<p>examples of modern agricultural enterprises in Uganda.</p> <p>c) In groups, learners analyse some policies and programmes aimed at modernising agriculture in Uganda, such as Plan for the Modernisation of Agriculture (PMA), The Agriculture Sector Strategic Plan (ASSP)</p> <p>d) They summarise the steps, resources, and stakeholders needed to modernise agriculture and evaluate the success realised by each policy or programme. Groups share their ideas in a whole class discussion.</p> <p>e) Individually, learners carry out library or online research to analyse the <b>Green Revolution</b> as a scientific and technological intervention in agriculture. They summarise lessons which Uganda can learn from the countries participating in this revolution. They present their reports and critique each other's work.</p>	<p>modern agriculture, noting how well they can link their explanation to the farming methods used and the salient characteristics of that type of agriculture.</p> <p>c) Observe learners during class discussions, focusing on accuracy and logical flow of ideas.</p> <p>d) Evaluate learners' reports about the green revolution for depth of analysis, accuracy of facts, and ability to relate experiences of <b>the</b> countries participating in the green revolution to local context.</p>
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**TOPIC 5: Soil Development and Management**
**Duration: 51 Periods**

**Competency:** The learner proposes feasible ways of using and managing soil through gathering and analysing information about soil properties, formation, and quality to promote sustainable development.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Assessment Strategies</b>
a) analyse the significance of the composition and properties of soil to land use and development (u, v/a).	<p><b>Components and Properties of Soil</b></p> a) Using materials such as soil samples, magnifying glass, textbooks and reference materials, digital resources, and videos & documentaries, guide learners to brainstorm the meaning of soil and its components. Summarise their ideas and guide them to reach an agreement on the meaning and components of soil. b) In groups, learners analyse different soil samples to find out the components of soil. Groups draw a table to record their observations. Groups display and share their findings in a gallery walk. c) Learners examine soil samples to find out the properties of soil including: structure, texture, colour, water retention (drainage), porosity, and potential hydrogen ion levels (pH). They record their findings and make presentations. d) Learners carry out a fieldwork study of the local area to investigate the types and properties of soil. They draw transects and other diagrams to illustrate the influence of soil on land use in the area. e) Individually, learners carry out library or online research about soil, its components and properties. They use diagrams and notes to illustrate their findings.	a) Probe learners as they make their submissions about the meaning and components of soil. Evaluate their level of environmental awareness and ability to support their ideas with appropriate facts and examples. b) Observe learners as they analyse soil samples focusing on how well they follow the recommended procedure of carrying out scientific investigation and pay attention to details. c) Assess learners' fieldwork findings for accuracy of information, and ability to establish and illustrate cause-and-effect relationship in the real-world.



<p>b) analyse soil formation in a selected locality by examining soil forming processes, factors influencing soil formation, and their relative significance (s, gs, v/a).</p>	<p><b>Soil Formation</b></p> <p>a) Through questioning, guide learners to revise rock weathering as one of the soil forming processes.</p> <p>b) In groups, learners analyse texts about the processes of soil formation, make notes with illustrations, and present their ideas in a whole-class discussion. Groups critique each other’s work and make refinement.</p> <p>c) Guide learners to understand the processes of soil formation through explaining further where necessary, using videos or other illustrations, and pointing out key facts for emphasis.</p>	<p>a) Probe learners as they respond to questions about rock weathering, noting their ability to relate the types and processes of weathering to the types and properties of the soil.</p> <p>b) Observe learners as they present and discuss their findings about the processes of soil formation. Note their ability to follow the thread of a discussion and make appropriate contribution.</p>
	<p><b>Factors influencing Soil Formation</b></p> <p>a) Learners analyse soil samples such as clay, sand, loam and red earth, identify their differences, and suggest possible reasons for the differences observed.</p> <p>b) In groups or pairs, learners analyse textbook content, extracts, and other sources of information about factors influencing soil formation. Groups write brief notes and make presentations. Group ideas contribute to a class discussion.</p> <p>c) Learners conduct a fieldwork study of a local area to investigate soil types, properties, factors influencing soil formation, and soil forming processes taking place in the area. They make reports and share their findings through whole class presentations.</p> <p>d) Challenge learners to summarise the main soil types and their respective properties and how these reflect the soil forming processes and factors influencing soil formation.</p>	<p>a) Observe learners as they analyse soil samples and suggest possible reasons for the differences observed. Pay special attention to their ability to recognise the value of others’ ideas and transform disagreements into shared solutions.</p> <p>b) Evaluate learners’ notes about factors influencing soil formation for correctness of information, depth of reasoning and ability to find appropriate points in a text for summarisation or paraphrasing.</p> <p>c) During presentations, prompt learners to elaborate their ideas. Assess their ability to speak confidently and explain their opinions clearly and logically.</p>

<p>c) deduce the arrangement of soil layers in a selected area using information from secondary sources and field observations in order to determine possible developments that can be carried out in the area (u, s, gs, v/a).</p> <p>d) infer suitable land use options for certain areas using the knowledge of soil profile and soil catena (u, gs v/a).</p>	<p><b>The Soil Profile</b></p> <p>a) Learners visit a roadside cutting or a graded construction site, or a quarry or study a photograph to investigate a soil profile. They draw a diagram to illustrate what they observe. Challenge them to suggest possible names for the different layers shown on the diagram. Learners display their diagrams and critique each other's work.</p> <p>b) Collaboratively, learners explain what they understand by a soil profile.</p> <p>c) Learners study texts /extracts /photographs /a chalkboard diagram or watch a video about a fully developed idealised soil profile. They draw and annotate a diagram of the profile and compare it with the field sketch they drew.</p> <p>d) Guide learners to understand that the three-layer soil profile seen in the field is oversimplified and may vary with locations and time.</p> <p>e) In groups, learners carry out library or online research to compare soil profiles of two contrasting climatic regions. They look for reasons accounting for the differences in the soil profiles.</p> <p>f) Through questioning and discussion, guide learners to explore the influence of the soil profile on land use and development.</p> <p>g) Learners carry out a project to determine the soil profile of selected area(s) using information on topographic survey maps, photographs, line transects, or field observations and how such a profile can influence land use and development.</p>	<p>a) Observe learners as they investigate a soil profile and draw diagrams to illustrate it, noting their ability to sort and analyse information and look for patterns, and make generalisations.</p> <p>b) Assess learners' diagrams of the soil profile for richness of information, accuracy in representing soil layers, and logical arrangement of the layers.</p> <p>c) In a conversation, ask learners to explain in detail why soil profiles differ with climatic regions. Pay special attention to the depth of their reasoning and ability to relate soil formation and development to rainfall, temperature, and movement of water.</p> <p>d) Assess learners' project work throughout the process paying special attention to their ability to:</p> <ol style="list-style-type: none"> <li>i) plan and conduct investigations.</li> <li>ii) write and present information coherently.</li> <li>iii) use a range of media to communicate ideas.</li> <li>iv) work together to generate ideas.</li> <li>v) analyse and interpret maps, photographs and primary data.</li> </ol>
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	<p><b>The Soil Catena</b></p> <p>a) Learners study a suitable textbook or a teacher-drawn diagram of a soil catena, copy it into their notebooks, and analyse the arrangement of soils. They discuss possible reasons for variations in soil types across a small area and along the same slope.</p> <p>b) Using a Geography or the English language dictionary, learners find the meaning of “catena” and relate it to the soils. They then explain their understanding of a soil catena.</p> <p>a) Learners conduct a field study on a slope, from the valley to the hilltop. They dig pits or holes at different elevations along the slope, collect soil samples, and examine soil variations. They draw a line transect and annotate it to illustrate the relationship between slope, soil types, and land use.</p> <p>b) Learners display their field findings and diagrams in the classroom. They conduct a gallery walk to review and critique each other’s work, providing constructive feedback.</p>	<p>a) Observe learners as they draw the diagrams for accuracy, and clarity of representation of the arrangement of soil types along the slope (top sequence).</p> <p>b) Evaluate learners’ reasons for differences in soil types along the same slope, noting how logical their reasoning is and their ability to relate soil development to relief, drainage, movement, and deposition of surface materials and possibly differences in parent rocks.</p> <p>c) Observe learners as they investigate the soil catena during field study. Note their ability to apply appropriate sampling and data collection technique in order to get reliable findings.</p>
<p>e) analyse factors affecting soil productivity to propose sustainable practices to enhance soil quality for long-term agricultural success and environmental health (k, u, s, v).</p>	<p><b>Soil Productivity</b></p> <p>a) Using the English language dictionary or other reference books, learners look up the meaning and usage of the word ‘productivity’. Using the information, they have got, learners discuss the meaning of soil productivity.</p> <p>b) Through questioning, guide learners to understand the concept of soil productivity in relation to plant growth, especially crop production and forestry.</p>	<p>a) Listen to learners’ contribution to the meaning and usage of the terms productivity and soil productivity. Evaluate their ability to construct new knowledge by transferring exiting knowledge.</p> <p>b) Prompt learners to explain in detail the factors affecting soil productivity. Evaluate the depth of their knowledge and ability to relate soil composition, properties, and land use</p>

	<p>c) Learners brainstorm the difference, and relationship, between soil fertility and soil productivity. They create a mind map to explain the relationship.</p> <p>d) Learners conduct a library or online research the importance of soil productivity to farmers, foresters, and environmentalists, and write brief notes.</p> <p>e) Through guided discovery, write the following factors and challenge learners to work in groups to explain and illustrate how each of them can affect soil productivity:</p> <ul style="list-style-type: none"> <li>i) physical properties of soil</li> <li>ii) chemical properties including nutrients and pH</li> <li>iii) biological characteristics such as soil organisms</li> <li>iv) agricultural management practices</li> <li>v) soil erosion</li> <li>vi) land pollution</li> </ul> <p>f) Groups make write-ups of their explanation and make presentations to the whole class for discussion.</p> <p>g) Individually, learners examine textbooks, magazines, research reports, or online materials to find out measures to improve soil productivity and write reports.</p> <p>h) Learners carry out a project to help a local farming community improve and maintain soil productivity.</p>	<p>practices to soil productivity.</p> <p>c) Observe learners during discussions and presentations, noting how well they use appropriate gestures and expression to make their presentation more engaging.</p> <p>d) Assess learners' reports on measures to improve soil productivity for:</p> <ul style="list-style-type: none"> <li>i) relevance of information.</li> <li>ii) respect for environment.</li> <li>iii) ability to use a range of media to communicate ideas.</li> </ul>
<p>f) propose feasible soil conservation strategies for a selected area to promote sustainable development through analysing the causes and</p>	<p><b>Soil Degradation and Conservation</b></p> <p>a) In groups, learners brainstorm the types and causes of soil degradation. They define soil degradation in their own words, summarise their ideas, and share them with the class using the</p>	<p>a) Observe learners as they present and discuss their ideas about the meaning of soil degradation. Note how broad their perspectives are and how well they can draw some ideas from the</p>

<p>effects of soil degradation (v/a).</p>	<p>jigsaw technique. Group findings contribute to a whole-class discussion.</p> <p>b) Learners watch a video on soil degradation or analyse textbooks and photographs to explore its types, causes, and effects. They create an illustrated write-up and present their findings to the class for discussion.</p> <p>c) Learners conduct a field study in the local area to investigate soil degradation. They write reports outlining their observations and highlight the challenges of addressing soil degradation in the area.</p> <p>d) Learners analyse <b>two</b> case studies of areas affected by soil degradation—one from a developed and another from a developing country. They examine the nature, causes, effects and control measures, then document key lessons Uganda can learn from these case studies.</p>	<p>factors affecting soil productivity.</p> <p>b) In a conversation, challenge learners to explain how their own activities can contribute to soil degradation. Assess their level of awareness and respect for the environment.</p> <p>c) Evaluate learners' case study analyses for details, accuracy, and ability to sort and analyse information.</p>
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**TOPIC 6: Population and Development**
**Duration: 38 Periods**

**Competency:** The learner proposes strategies for managing population as a key resource in development through analysing its dynamics and their implications for development at different scales.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Strategies</b>	<b>Assessment</b>
a) investigate the distribution and density of population using topographic maps, statistical data, and maps to guide decision-making. (s)	<p><b>Distribution and Density of Population</b></p> <p>a) Learners study topographic survey maps from different regions of Uganda to analyse the distribution and density of population. Using information from the maps and their background information, learners discuss the factors influencing population distribution and density in those areas.</p> <p>b) Individually, learners research the recent national population census data for Uganda using the internet or textbooks. They plot the data on base maps to create a dot map and a choropleth map, representing population distribution and density, respectively. Learners write explanatory notes analysing the pattern displayed and factors influencing them.</p> <p>c) In groups, learners conduct a field study within their school's parish to investigate population distribution and density. They count households, estimate population density, and draw both a density map and a dot map to visualise their findings. Groups compare local patterns with national trends.</p> <p>d) Groups present their findings to the class, followed by group discussions to refine their understanding.</p> <p>e) In a whole-class discussion, learners examine the implications of population distribution and density</p>	<p>a) Observe learners as they analyse topographic survey maps, focusing on their ability to use the key and contour lines to identify features and establish geographical relationships.</p> <p>b) Assess learners' statistical maps for accuracy, clarity, and effectiveness of communication, particularly regarding the concentration and spatial layout of the population.</p> <p>c) In a conversation, prompt learners to explain how the factors influencing population distribution and density in their parish and areas shown on survey maps can be used to explain spatial population patterns in other areas. Pay attention to their ability to make generalisations using the information about a small area and evaluate how well they support their arguments using appropriate facts and examples.</p>	

	<p>for resource utilisation and development in Uganda.</p> <p>f) Learners analyse <b>two</b> case studies of population distribution and density in regions or countries with contrasting geographical settings. They investigate the effects on the environment and national development, drawing comparisons and lessons applicable to Uganda.</p>	
<p>a) propose ways of regulating population growth in developed and developing countries based on statistics and other relevant knowledge (u, s, gs).</p>	<p><b>Population Growth and Size</b></p> <p>a) In groups, learners analyse reports and statistics about Uganda’s population and housing censuses since 1980 to investigate the changing size of the country’s population. They draw line or bar graphs to represent the statistics, examine trends, and patterns, of population growth and factors accountable for them. Groups share their graphs and explanation for discussion.</p> <p>b) In groups, learners research population control measures in a developed country and a developing country, and discuss the success realised by each country and challenges it faced.</p> <p>c) Learners present their findings and suggest which methods are applicable or adaptable to Uganda.</p> <p>d) Learners debate whether population control policies are more effective in developed or developing countries, citing statistics and real-world examples to support their arguments.</p> <p>e) In pairs, learners conduct a community survey on attitudes towards family size, family planning, and population control. They use questionnaires to gather data and identify factors influencing</p>	<p>a) Observe learners working in groups to analyse reports and statistics about Uganda’s population and housing censuses, paying attention to how effectively they encourage others to contribute and share ideas.</p> <p>b) Prompt learners during the discussions, presentations, and debates. Assess their ability to identify different perspectives and incorporate information shared by others into their analysis.</p> <p>g) Evaluate learners’ suggestions for population control methods applicable to Uganda. Focus on their ability to evaluate different solutions and assess their feasibility in addressing the issue.</p> <p>c) Evaluate community survey reports, focusing on how well they reflect the beliefs and attitudes of the local community, as well as the practicality and effectiveness of the proposed strategies for</p>

	<p>population growth, and write reports proposing locally relevant strategies for regulating population growth.</p> <p>f) Pairs present their findings to the whole class for discussion.</p>	<p>regulating population growth.</p>
<p>a) infer the likely impact of population structure of a town/country or region on resource utilisation and people's wellbeing to suggest ways of managing the population. (v/a)</p>	<p><b>Population Structure</b></p> <p>a) In groups, learners analyse population pyramids of countries or regions with contrasting levels of economic development, including Uganda. They examine the age and sex composition of each geographical unit, and deduce how its population structure impacts resource use and wellbeing. They summarise their findings and make presentations.</p> <p>b) Individually, learners use data on age and sex/gender composition in a given region or country to construct a population pyramid and analyse its implications for resources and wellbeing.</p> <p>c) In groups, learners conduct a simple survey of the local community to identify the population structure, challenges and benefits associated with it. They write a report or make presentations for discussion.</p>	<p>a) Observe learners as they work in groups to analyse population pyramids, focusing on how effectively they interact with others and their ability to identify patterns and make generalisations based on the data.</p> <p>b) Converse with learners during discussions and presentations, focusing on their ability to sort and analyse information, identify problems caused by specific population structures, and suggest practical solutions.</p> <p>c) Assess learners' population pyramids, focusing on their ability to accurately use numbers and measurements in constructing and interpreting the pyramids.</p>
<p>a) predict occurrence and impact of population migration in Uganda and other places based on the knowledge of migrations (c).</p> <p>b) develop a plan/manifesto for regulating or</p>	<p><b>Population Migrations</b></p> <p>a) Learners conduct a survey in the local community to determine when the inhabitants settled in the area, where they or their ancestors migrated from, and the reasons behind the migration. They write reports and share their findings through presentations.</p> <p>b) In groups, learners analyse texts, newspaper articles, statistical data, and flow-line maps to explore past</p>	<p>a) Observe learners as they engage with the different sources of information about population migrations, noting their ability to sort and analyse information and to interact effectively with others.</p> <p>b) Prompt learners to explain their concept maps in detail. Note how effectively their maps communicate</p>



<p>promoting a certain type of population migration by applying relevant information (c).</p>	<p>and current population migrations in Uganda. They identify the migration types and patterns, causes, and effects.</p> <p>c) Challenge groups to create concept maps or infographics that illustrate the relationship between population migrations, their causes, and effects, and present their findings to the class.</p> <p>d) In a whole-class discussion, learners explore measures that have been implemented or can be taken to manage or reduce different types of migration.</p> <p>e) Through questioning and discussion, guide learners to predict future trends and patterns of population migrations in Uganda.</p> <p>f) Learners conduct library or the internet research to investigate case studies of population migrations in Africa and other parts of the world, marking areas of high emigration and immigration, and discussing reasons behind these trends.</p> <p>g) Learners explore how other countries and regions manage population migrations, make notes, and identify lessons Uganda can learn from their policies and efforts.</p> <p>h) Individually, learners select a type of migration in Uganda and draft a plan to regulate or promote it, providing reasons for their plan and discussing the expected impacts.</p>	<p>the linkages and relationship between the ideas being explored.</p> <p>c) Assess learners' plans and presentations, focusing on clarity of ideas, feasibility of the proposals, and ability to evaluate different solutions.</p>
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## TOPIC 7: Drainage and the Role of Rivers in Shaping the Landscape

**Duration:** 32 Periods

**Competency:** The learner devises sustainable ways of harnessing drainage features and related resources for development through analysing their nature and impact on landscape, ecosystems, and human activities.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Assessment Strategies</b>
a) demonstrate an understanding of Uganda's drainage system by using relevant maps and diagrams to illustrate its aspects (u, s).	<p><b>The drainage System of Uganda</b></p> a) In groups or pairs, learners study a topographic map of a local or other area in Uganda to identify the drainage features in the area. Groups share their findings. b) Learners analyse a wall /textbook/atlas map showing the drainage system in Uganda. They copy the map into their notebooks and label the major drainage features in the country. c) Learners make brief notes to describe the drainage system of Uganda. d) Learners exchange their notebooks and critique each other's map and notes. e) In groups, learners study a map showing the drainage basins in Uganda, copy the map into their notebooks, and draw a table to show the main drainage features found in each basin. f) Learners discuss as a whole class and agree on the meaning of drainage and drainage system.	a) Observe learners as they analyse the topographic survey map. Note how effectively they use the key to identify the geography of the area represented by the map, and how broad their knowledge of drainage is. b) Engage learners in a conversation about their understanding of drainage, focusing on their ability to speak confidently and clearly as they explain their opinions and ideas. c) Assess learners' maps for accuracy, clarity, and the richness of information (details). Also, evaluate their ability to incorporate the key qualities of a good map.
b) assess the role of Pleistocene Earth movements in the evolution of Uganda's	<p><b>Evolution of Uganda's Drainage</b></p> a) Using a map of ancient drainage in East Africa (before Pleistocene period) and the map of present drainage, learners explore the evolution of Uganda's drainage system. b) Learners compare the map of ancient drainage (before Pleistocene period) and	a) Observe learners as they analyse the two maps, noting their ability to read and use a map to identify the geography of an area. b) Ask learners to explain how proto-rivers like

<p>drainage and resources (v/a).</p>	<p>the map of present drainage system of Uganda and write down their findings.</p> <p>c) Through questioning, challenge learners to suggest possible causes of the observed differences between the two drainage systems.</p> <p>d) Learners revise the processes of uplifting and down warping covered at Lower secondary and how they affect landscape.</p> <p>e. Using the map of ancient drainage of Uganda and a diagram or demonstration, guide learners to explore how uplifting, down warping, and the reversal of proto rivers led to formation of Lake Victoria, Lake Kyoga, and others, River Nile and the associated waterfalls.</p> <p>f. Learners draw the maps and diagrams in their notebooks and summarise the processes of down warping and stream reversal.</p>	<p>Kagera and Katonga could continue flowing eastwards after reversal. Note their ability to relate the formation of Mountain Rwenzori and the hills in Central Uganda to improved rainfall and creation of tributaries.</p> <p>c) Assess learners' maps and notes for accuracy, clarity, and effectiveness of their comparison between drainage patterns before and after stream reversal.</p>
<p>c) infer, from photographs, topographic survey maps and field observations the river channel processes taking place in an area (s).</p>	<p><b>The Role of Rivers in Shaping the Landscape</b></p> <p>a) Learners analyse photographs and topographic survey maps or watch a simulation of a river channel and identify the river channel processes taking place in the areas shown and their effects on landscape. They write notes and draw diagrams to illustrate their findings.</p> <p>b) Learners visit a local stream or river to investigate channel processes and how they affect relief and landscape. They write a report and illustrate it with a concept map linking river channel processes to their effects on landscape.</p> <p>c) In a whole class discussion, learners compare their field study findings with information gathered from photographs, topographic survey maps, or the simulations, and update their notes accordingly.</p> <p>d) Individually, learner research textbooks or the internet for diagrams of river channel processes and their effects on landscape. They then copy the diagrams and write</p>	<p>a) Observe learners as they investigate channel processes in the field study. Note how effectively they apply methods and techniques of data collection.</p> <p>b) Observe learners as they engage with photographs and topographic survey maps, focusing on their ability to read, analyse and interpret secondary sources of geographic information.</p> <p>c) Evaluate learners' field study reports and notes for relevance, accuracy, and logical flow of information, and their ability to use a range of</p>

	brief notes to explaining each process and its impact on landscape.	media to communicate ideas.
d) develops a plan for exploiting the resource potential presented by a drainage feature or features to improve peoples' lives by applying relevant knowledge and skills (u, s, gs, v/a).	<p><b>Importance of Drainage in Development</b></p> <p>a) Drawing on the knowledge gained during the field study of a local stream or river and their own experiences, learners discuss the environmental, cultural, and economic importance of drainage features.</p> <p>b) Learners analyse photographs of human activities at drainage features or conduct internet/library research to explore the resources associated with drainage features and their role in development. They take notes and compare their findings with ideas raised during the earlier discussion.</p> <p>c) Individually, learners conduct library or internet research to analyse <b>two</b> case studies of important drainage features in Africa and other parts of the world. They examine the influence of these drainage features on the development of the countries or regions where they are found and challenges associated with harnessing them for development. Learners write reports and present their findings to the class.</p> <p>d) Learners design and implement a project focused on promoting the sustainable utilisation of a drainage feature in their local area.</p>	<p>a) Observe learners as they present and discuss their field study findings. Assess their ability to actively listen with comprehension and ask insightful questions to evaluate different perspectives.</p> <p>b) Evaluate learners' notes on photographs, focusing on how effectively they analyse and interpret photographs to draw conclusions about the geography of the area shown.</p> <p>c) In a conversation, ask learners to compare and contrast the importance of the drainage features in the case studies with that of the local drainage feature nearest to their home or school. Focus on their ability to support their ideas with appropriate facts and examples.</p>

## TOPIC 8: Energy Production

**Duration:** 38 Periods

**Competency:** The learner devises innovative ways of developing and using energy through analysing the production, consumption and sustainability of the various sources of energy to balance energy use and environmental stewardship.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Assessment Strategies</b>
<p>a) Demonstrate an understanding of energy resources and their spatial distribution to appreciate variations in energy production (u, s, gs).</p>	<p><b>Major Energy Resources</b></p> <p>a) Through brainstorming, learners identify energy sources used in their homes and communities. They summarise the contributions of these energy sources on the chalkboard.</p> <p>b) Through questioning, guide learners to explore less familiar energy sources like geothermal energy, wind energy, ocean energy, and hydrogen energy.</p> <p>c) In pairs, learners discuss and categorise all energy sources identified as renewable or non-renewable.</p> <p>d) In groups, learners use atlas or hand-drawn or digital maps to locate major energy sources in Uganda and other East African countries. They copy the maps into their notebooks and describe the spatial distribution of energy sources. Groups present their findings for discussion.</p> <p>e) Learners use atlas or hand-drawn or digital maps to locate major energy sources in Africa and other parts of the world and write notes to describe the distribution. They examine the advantages and disadvantages of each energy source.</p> <p>f) Individually, learners research textbooks, magazines, journals, research reports, or online resources for factors influencing the distribution of energy resources in Uganda and globally. They write a report and present to the whole class.</p>	<p>a) Observe learners as they work in pairs or groups, noting how well they recognise the value of other’s ideas and respect divergent views.</p> <p>b) In a conversation, ask pairs to justify their placement of each energy source under renewable and non-renewable categories. Note their ability to relate renewability to the formation, abundance, and sustainability of the energy source.</p> <p>c) Evaluate learners’ presentations on energy sources and their advantages and disadvantages, focusing on their ability to:</p> <ul style="list-style-type: none"> <li>i) write and present information coherently.</li> <li>ii) base advantages and disadvantages on critical parameters such as eco-friendliness,</li> </ul>

		renewability, efficiency, cost, storage, and safety.
<p>b) compare energy production and consumption in countries at different levels of development to understand the need for wise use of energy resources (v/a).</p>	<p><b>World energy Production and Consumption</b></p> <p>a) Learners analyse statistical data and graphs, charts, or map infographics on energy production and consumption in Uganda. They describe the trends and suggest reasons behind these trends.</p> <p>b) Individually or in groups, learners research information from sources such as <i>“The State of the Environment Reports for Uganda”</i> by NEMA (2004/2005, 2010, etc.), the internet, or other relevant materials. They gather insights on energy resources, production, and consumption, and challenges in Uganda’s energy sector, then write reports and share their findings in presentations.</p> <p>c) Learners examine case studies of energy production in both developed and developing countries and regions of the world. They analyse relevant statistics, create graphs and charts to visualise the data, describe the trends, compare energy production and consumption, and draw conclusions based on their findings.</p>	<p>a) Observe learners as they analyse statistics and statistical drawings, noting their ability to interpret and interrogate mathematical data and to use numbers and measurements accurately.</p> <p>b) In a conversation, ask learners to apportion responsibility for challenges facing energy development in Uganda. Note their ability to present balanced arguments supported by relevant facts and examples.</p> <p>c) Evaluate learners’ reports on case studies for details, accuracy of information and ability to use a range of media to communicate information.</p>
<p>c) analyse the influence of economic, environmental, and social factors on energy resource development to form opinions about challenges facing the energy sector (u, v/a).</p>	<p><b>Factors Affecting Development of Energy Resources</b></p> <p>a) Through questioning and guided discussions, learners explore factors affecting the development of energy resources in Uganda. They examine relevant examples such as petroleum in the Albertine region, hydro energy, and hydro-geothermal energy in Bundibugyo, Kasese and Kibiro.</p>	<p>a) Observe learners during the discussions, noting their ability to follow prompts and investigate issues to create meaningful knowledge supported with appropriate examples.</p>

	<p>b) Learners conduct library/internet research on factors affecting the development of energy resources in different parts of the world. They compare these factors with those in Uganda and then write reports and present their findings. Each learner's findings contribute to a whole-class discussion.</p> <p>c) Learners classify the factors affecting energy resource development into economic, environmental, and social categories. They discuss, with reasons, which category they believe is most important for the development of energy resources.</p> <p>d) Learners analyse case studies of energy development in both a developing and developed country. They explore factors affecting energy resource development, such as oil in Saudi Arabia, German investment in solar energy, or hydroelectric power production in China.</p>	<p>b) In a conversation, prompt learners to explain their assessment of the significance of economic, environmental, and social factors in the development of energy resources. Note their ability to defend their opinions and use relevant facts to support their arguments.</p> <p>c) Assess research presentations for depth of content, clarity of arguments, and relevance of examples.</p>
<p>d) assess the impact of energy development on the environment to appreciate the benefits and problems associated with harnessing energy resources (u, v/a).</p>	<p><b>Environmental Impacts of Energy Production</b></p> <p>a) Learners conduct a field study in the local area to investigate the extraction of energy sources or an energy project.</p> <p>b) Learners assess the impact of energy extraction or production on both the natural and human environments. They suggest mitigation strategies to address the negative impacts. After writing their reports, learners display them in the classroom and critique each other's findings.</p> <p>c) Learners analyse case studies on the environmental impacts of energy production in Africa and around the world (e.g. construction of a power dam, establishment of a nuclear power station, oil mining). They review texts, maps, photographs, newspaper articles,</p>	<p>a) Observe learners during the field study, focusing on how effectively they apply the methods and techniques of collecting primary data.</p> <p>b) During the follow-up session of the field study, probe learners on the negative environmental impact of power production identified in the field and the mitigation measures suggested. Evaluate their ability to identify problems and</p>

	and/or documentaries detailing the impacts, and then write reports summarising their findings.	suggest feasible solutions.
<p>e) evaluate policies and strategies aimed at ensuring access to sustainable sources of energy to understand ways of reducing energy poverty (v/a).</p> <p>f) argue out the case for sustainable utilisation of energy resources at local, regional, and global scales to promote energy security (v/a).</p>	<p><b>Sustainable Utilisation of Energy Resources</b></p> <p>a) Learners research departmental reports or the internet for energy policies and strategies implemented by Uganda such as Energy Policy for Uganda (2002), Renewable Energy Policy for Uganda (2007), Renewable Energy Investment Plan for Uganda (2008), and the National Biomass Energy Demand Strategy for Uganda 2001-2010.</p> <p>b) They assess the effectiveness of these efforts and challenges in their implementation. They then propose more effective measures to increase access to sustainable energy sources.</p> <p>c) Learners conduct a textbook or internet research to analyse case studies of energy policies in other African countries and developed nations (e.g. Zimbabwe and Canada).</p> <p>d) Through guided discussions, learners assess the effectiveness of energy policies in ensuring sustainable energy use in the case study countries. They compare the policies with Uganda's policies and identify lessons Uganda can learn from these countries.</p> <p>e) Learners engage in a debate on whether developing countries should prioritise renewable or non-renewable energy sources to ensure long-term energy security.</p>	<p>a) Observe learners as they present their assessment of the effectiveness of Uganda's efforts to ensure sustainable energy use. Focus on their ability to sort and analyse information, and how well their proposals align with the local context.</p> <p>b) Probe learners to identify lessons Uganda can learn from the case studies and assess their ability to transfer knowledge and apply it in new situations.</p> <p>c) Evaluate learners' submissions during the debate, focusing on clarity, logical flow of ideas, maturity of reasoning, and their ability to defend their opinions effectively.</p>



## TOPIC 9: Climatology and Meteorology

**Duration:** 75 Periods

**Competency:** The learner demonstrates understanding of climate and weather through analysing atmospheric dynamics, climate data, and predicting weather patterns and their effects to propose evidence-based strategies for adapting human activities to climate.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Assessment Strategies</b>
a) analyse the atmosphere and its influence on weather, climate and life on earth through examining its layers and composition (u, s, gs).	<b>The Nature of the Atmosphere</b> a) Learners observe the sky and the surroundings from a window or outside the classroom, then describe their observations of the atmosphere. b) Through guide discussions, learners explore the concept of the atmosphere, its main components, and the role of each component in influencing weather and climate. c) Learners study a diagram illustrating the vertical structure (layers) of the atmosphere, reproduce it in their notebooks, and write brief notes to explaining the characteristics and influence of each layer on weather and life on Earth.	a. Ask learners to explain the sources of solid particles found in the atmosphere. Assess their ability to relate these particles to pollution, resulting from their own activities. b. Evaluate learners' diagrams and notes for accuracy, and effectiveness in communicating the intended information.
b) demonstrate an understanding of solar radiation by analysing its nature, interaction with the atmosphere, and effects on weather, climate, and life on Earth (u, gs, v/a).	<b>Solar Radiation and Atmospheric temperature</b> a) Learners step outside the classroom, stand under the sun for 3-5 minutes, and describe what they observe in the air around them and what they feel on their bodies. b) Through questioning and explanation, guide learners to understand that the light they see and the heat they feel are part of the electromagnetic energy from the sun, known as solar radiation. c) Learners study a diagram showing the journey of solar energy (solar cascade) and analyse the processes solar radiation undergoes as it passes through the atmosphere. They reproduce the diagram in their notebooks, annotate it, and write	a) Observe learners as they describe their observations about the atmosphere. Note their level of environmental awareness and ability to disaggregate solar radiation into light and suntan/heat energy. b) Engage learners in a discussion on what life on Earth would be like if all the radiation emitted by the Sun reached the Earth's surface. Assess the level of maturity of their reasoning and the

	<p>explanatory notes on the interaction between solar radiation, the atmosphere, and the Earth's surface.</p> <p>d) In groups, learners analyse extracts, textbooks, or the internet sources to examine the nature and characteristics of solar radiation, summarise their findings, and present to the whole class.</p> <p>e) Challenge learners to explain the difference between incoming solar radiation (insolation) and terrestrial radiation.</p> <p>f) Through questioning and discussion, guide learners to explore how solar radiation regulates Earth's temperature through the greenhouse effect, making the planet habitable for life.</p> <p>g) Learners engage in a class discussion on the significance of solar radiation for weather, climate, and life on Earth.</p>	<p>ability to argue using scientific evidence.</p> <p>c) Evaluate learners' diagrams for accuracy, readability and effectiveness in communicating the relationship between solar radiation, the atmosphere and the Earth's surface</p>
<p>c) discuss factors influencing the amount of solar radiation received at given place and appreciate temperature variations and their effects on life (u, v/a)</p>	<p>a) In groups, learners model the Earth-Sun relationship by placing a globe or football in a darkened room and shining a flashlight or torch on it to simulate the Sun's rays. They rotate the globe to demonstrate how sunlight falls on different parts of the Earth at varying angles. They then discuss why different regions receive different amount of solar radiation.</p> <p>b) Learners analyse textbook chapters, extracts or conduct internet research to identify factors influencing the amount of solar radiation (insolation) received at any location. They summarise key ideas and illustrate them with diagrams where applicable.</p> <p>c) In a whole-class discussion, learners explore how variations in insolation affect human activities and ecosystems in their communities, and in the different parts of the world.</p>	<p>a) Observe each group and assess, the modelling skills, and how accurately they manipulate the globe/ball and flashlight to represent the Earth-Sun relationship.</p> <p>b) Probe learners as they discuss the effects of variations in insolation on human activities and ecosystems. Note how effectively they support their ideas with appropriate facts and real-world examples.</p> <p>c) Assess learners' summaries for use of relevant illustrations and logical flow of information.</p>
<p>a) analyse the causes, effects and implications of temperature</p>	<p><b>Vertical temperature variation</b></p> <p>a) Through questioning, guide learners to revise temperature as one of the elements</p>	<p>a) In a conversation, challenge learners to explain why temperature decreases</p>

<p>inversion on local weather patterns, air quality, and climate systems (u, v/a).</p>	<p>of weather studied at the Lower Secondary level.</p> <p>b) Learners analyse a textbook, teacher-drawn or digital diagram showing vertical variations in temperature, especially in the troposphere and stratosphere. They draw the diagram, write a summary of their analysis and share with the rest of the class.</p> <p>c) Learners analyse scenarios where factors like atmospheric pressure, humidity, and solar radiation influence vertical temperature variations and make presentations.</p> <p><b>Temperature Inversion</b></p> <p>a) Through questioning and discussion, guide learners to explore circumstances under which temperature may not decrease with height/altitude but may be low at lower altitude and high at higher altitude. Challenge learners to cite examples of such scenarios based on their own experiences.</p> <p>b) As a whole class, learners collaboratively explain what they understand by temperature inversion.</p> <p>c) Individually, learners conduct library or internet research on temperature inversion, focusing on types, causes, and effects on weather, air quality, and human activities. They write detailed reports, which are later used to enrich a whole-class discussion.</p>	<p>as we rise towards the Sun. Note their ability to explain the concept using knowledge from other sciences.</p> <p>b) Listen to learners' submissions on temperature inversion, taking note of their ability to relate it to local contexts such as formation of fog and mist in valleys.</p> <p>c) Evaluate learners' reports for depth and richness of information, and their ability to sort and analyse information.</p>
<p>a) demonstrate an understanding of the relationship between humidity and other weather conditions to appreciate the role of humidity in regulating temperature</p>	<p><b>Atmospheric Humidity</b></p> <p>a) Through questioning, guide learners to revise humidity as one of the elements of weather studied at the Lower Secondary level.</p> <p>b) Through brainstorming, learners explore the sources of water vapour and how it enters the atmosphere. Summarise their contributions and guide them to understand the main source of atmospheric humidity: evaporation of</p>	<p>a) In a conversation, ask learners to explain how various life processes and everyday human activities contribute to indoor and outdoor humidity levels. Note their ability to relate their explanations to concepts from science subjects such as Biology and Chemistry.</p>

<p>and maintaining life on Earth (u, v/a).</p> <p>b) predict the occurrence and intensity of precipitation using the knowledge of humidity (s, gs, v/a).</p>	<p>water from oceans, seas, lakes, rivers, streams; and vegetation.</p> <p><b>Types of Humidity</b></p> <p>a) Through questioning, guide learners to revise the types of humidity which they learnt at the Lower Secondary level.</p> <p>b) Learners analyse extracts, textbooks, or digital sources to explore the three types (indexes) of humidity and their interrelationship: absolute, relative and specific humidity. They write note to summarise key ideas.</p> <p>c) Demonstrate using inflated balloons, transparent bottles or drinking glasses of equal volume (to represent a parcel of air at the same temperature) how to calculate relative humidity based on saturation content and absolute humidity.</p> <p>d) Using real or hypothetical figures, learners individually practise calculating relative humidity.</p> <p>e) In pairs, learners role-play meteorologists explaining the three types of humidity to an audience, using graphs or other visual aids. The audience asks questions which lead to a whole-class discussion.</p> <p>f) Learners create tables or infographics to compare absolute, relative, and specific humidity, including their definitions, formulas for determining them, and real-life examples.</p> <p><b>Factors influencing Humidity of Place</b></p> <p>a) Write a list of factors affecting atmospheric humidity on the chalkboard and challenge learners to explain how each factor influences humidity.</p> <p>b) Individually, learners research textbooks or the internet, or watch videos to learn more about factors affecting atmospheric humidity. They write notes and illustrating their findings with figures and diagrams.</p> <p>c) Learners present their reports or notes, contributing to a whole-class discussion.</p>	<p>a) In a conversation, ask learners to determine which of the three types of humidity has the most practical value. Assess their ability to analyse situations, form reasoned opinions, and defend their viewpoints.</p> <p>b) Observe learners during the demonstration, focusing on their ability to recognise the role of questioning in developing ideas, and to identify key points in an explanation for summarisation.</p> <p>c) Evaluate learners' comparison tables or infographics for clarity and effectiveness in communicating ideas.</p> <p>d) Listen to learners as they explain how each factor affects humidity, assessing their ability to explain their ideas clearly and confidently.</p> <p>e) Observe learners during discussions, focusing on how well they respect each other's differing viewpoints and engage constructively.</p> <p>f) Observe learners as they analyse sources to explore the practical effects of humidity, noting their ability to turn disagreements into shared solutions.</p> <p>g) Assess learners' calculation of relative humidity, temperature, and precipitation</p>
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	<p><b>The significance of humidity</b></p> <p>a) Through brainstorming, learners explore the effects of atmospheric humidity on their daily lives, the community and livelihoods. Summarise their contributions on the chalkboard and use probing questions to elicit more ideas.</p> <p>b) In groups, learners study extracts, textbook chapters, photographs, or research the internet to examine the effects of atmospheric humidity on weather and climate patterns, plant and animal life, navigation and aviation, industry, and other sectors. They write and present their reports.</p> <p>c) As a whole class or in groups, learners visit a nearby weather station to collect data or use a hygrometer and a thermometer to measure and record humidity and temperature at their school's location. They determine relative humidity and use their findings to predict whether it will rain or not in the next 24 hours, providing justification for their prediction.</p> <p>d) Learners engage in a debate on the benefits and problems associated with humidity such as <i>"Humidity is more detrimental than beneficial for humans and the environment."</i></p>	<p>predictions. Focus on their ability to plan and conduct investigations, interpret mathematical data, and use mathematics to justify conclusions.</p> <p>a. Evaluate learners' participation in the debate, assessing their clarity, logical flow, and coherence of their arguments.</p>
<p>c) analyse the relationship between temperature, atmospheric pressure, and wind movement using appropriate illustrations (u, a/v).</p>	<p><b>Atmospheric Pressure and Wind Systems</b></p> <p>a) In a brainstorming session, learners recall and discuss the concept of atmospheric pressure from their Lower Secondary studies. Summarise their contributions and guide them to understand atmospheric pressure, its cause, and key characteristics.</p> <p>b) In groups, learners explore textbooks, extracts, or watch videos to investigate the types, causes, and effects of local winds (anabatic and katabatic). They record key points, support their explanations with diagrams, and present their findings to the class for critiquing. Conclude the presentations by reinforcing the effects of</p>	<p>a) Observe learners during the brainstorming session. Evaluate how well they can recall and use prior learning, and the depth of their knowledge.</p> <p>b) Observe learners as they engage with textbooks, extracts or videos, and diagrams. Focus on ability to turn divergent viewpoints into shared solutions.</p>

	<p>local winds on weather conditions and human activities.</p> <p>c) In groups, learners analyse diagrams of atmospheric pressure belts (equatorial low, subtropical high, polar high) to understand their distribution and relationship with wind systems. They create these diagrams, label high- and low-pressure zones, and discuss the influence of temperature on pressure belts and wind system formation. Summarise key insights.</p> <p>d) Groups present their summaries for class discussion, encouraging peer feedback and refinement of key concepts.</p>	<p>c) In a conversation, prompt learners to expound their ideas about the relationship between temperature, pressure, and winds. Note how well they articulate the linkages and how logical their ideas are.</p> <p>d) Evaluate learners writeups and diagrams for clarity, accuracy, and effectiveness in spelling out the intended relationships.</p>
<p>d) demonstrate an understanding of winds at different scales by examining their types, causes, and effects on weather, climate, and people's ways of life (u).</p>	<p>a) In groups learners conduct library or internet research to analyse an assigned wind system, examining its path, characteristics, and effects on weather and climate. They create maps to illustrate the location of their assigned wind system and summarise their findings in concise notes.</p> <p>b) Groups display their findings for a gallery walk, during which they observe, evaluate, and provide constructive feedback on each other's work.</p> <p>c) Using questioning and guide discussion, facilitate learners' deeper understanding of each wind system, its impact on weather and climate, and its influence on human activities and ways of life.</p>	<p>a) Observe learners as they engage with each group's work, assessing their ability to provide fair and constructive feedback, demonstrate respect for diverse viewpoints, and accept criticism positively.</p> <p>b) Engage each group in a discussion to elaborate on the characteristics and effects of their assigned wind system on weather and climate. Assess their depth of reasoning, clarity of explanation, and teamwork in defending their ideas.</p>
<p>e) predict weather conditions and their effect at a given place through interpreting weather maps and satellite images (u, s).</p>	<p>a) In groups, learners analyse a weather map and satellite image of a specific region, using isobars to identify areas experiencing rainfall, storms or other weather conditions. They interpret data to predict possible weather patterns over the next 24–48 hours.</p> <p>b) In groups, learners role-play as weather forecasters for different regions. They</p>	<p>a) Observe learners as they analyse weather maps, assessing the accuracy of their interpretations and the reliability of their weather predictions.</p> <p>b) Evaluate learners' weather report presentations, focusing</p>

	<p>present a weather report to the class, describing current conditions, predicting weather conditions for the next 48 hours, and explaining its potential impact on people’s daily activities and livelihoods.</p>	<p>on clarity, creativity, and the application of scientific reasoning in their role-play.</p> <p>c) Facilitate peer assessment of weather prediction write-ups, with learners evaluating how effectively their peers incorporated pressure and wind patterns in their forecasts.</p>
	<p><b>Air Masses</b></p> <p>a) In groups, learners analyse a map showing source regions of air masses. They identify specific air masses, trace their movement from the source to their destination, and predict their effects on weather conditions using appropriate meteorological terms.</p> <p>b) In pairs, learners role-play <i>Air Mass Narrators</i>, presenting their scenario as if narrating the journey of an air mass. Each pair describes the air mass type, its source region, its movement, and impact on weather condition at the destination.</p> <p>c) In groups, learners examine a weather map and satellite image of a specific region, identifying air masses and their associated weather patterns. They locate and describe any weather fronts or boundaries (e.g. cold front or warm front) and predict short-term weather conditions for the region.</p>	<p>a) Observe learners as they analyse the map of air masses, assessing their ability to read, interpret, and make informed inferences based on the information presented.</p> <p>b) Evaluate learners’ submissions on air masses and associated weather, focusing on their ability to use technical terminology, factual accuracy, and the reliability of their weather predictions.</p>
<p>f) articulate the role of ocean currents in distributing heat across low and high latitudes using relevant knowledge (v/a).</p>	<p><b>Ocean Currents</b></p> <p>a) In groups, learners analyse a world map of ocean currents. They replicate the map in their notebooks, marking and labelling warm and cold currents. Each group writes brief notes explaining the pattern of flow patterns of ocean currents and presents their drawings for class discussion.</p> <p>b) Groups conduct a hands-on simulation of ocean currents using two clear containers (representing oceans), warm- and cold-</p>	<p>a) Observe learners as they analyse the ocean currents map in groups, assessing their ability to read and interpret map information accurately and their effectiveness in encouraging group participation.</p>

<p>g) form opinions about the effects of ocean currents on the climate of coastal areas, adjacent landmasses and human activities. (v/a)</p>	<p>coloured water (e.g., red and blue food dye), salt, and a small fan or straw to mimic wind. In the first container, they create surface currents by using the fan/straw to move the water, observing how wind influences surface movement. In the second container, they add salt to one side and cold-coloured water to the other, mixing slowly to observe how dense, salty, or cold water sinks while less dense water rises. They record their observations and relate them to the characteristics of surface and deep-water currents.</p> <p>c) Individually, learners write at least two paragraphs explaining their understanding by ocean currents. They present their ideas to the class, followed by a whole-class discussion.</p> <p>d) Through guided explanation, help learners understand the general patterns of ocean currents, such as warm currents flowing away from the equator and cold currents flowing toward the equator.</p> <p>e) Individually, learners use textbooks, the internet, or other credible sources to research specific cold and warm ocean currents. They investigate their origin, causes, movement, characteristics, and effects on weather, climate, ecosystems, and human activities. Each learner prepares a detailed report, including relevant maps and diagrams, and presents their findings to the class.</p>	<p>b) Assess learners as they simulate ocean currents, focusing on their ability to follow logical steps in conducting a scientific demonstration and investigation.</p> <p>c) Engage individual learners in discussions to explain their understanding of ocean currents, evaluating the depth and accuracy of their knowledge, as well as their ability to present ideas logically.</p> <p>d) Review learners' research work for depth and accuracy of information, assessing how well they use evidence, maps, and illustrations to support their ideas or arguments.</p>
<p>h) analyse climatic changes through time and at different scales to appreciate the origin and nature of the ongoing climate change (v/a).</p>	<p><b>Global Climatic Changes</b></p> <p>a) Use questioning and discussion to help learners review their prior knowledge of climate change in Uganda and other parts of the world, as covered in Lower Secondary Curriculum.</p> <p>b) Through guided explanation, help learners understand that while they are familiar with recent climate change over the past millennium, the Earth's climate has been changing throughout history.</p>	<p>a) Observe learners as they revise climate change concepts, assessing their level of environmental awareness and depth of their knowledge.</p> <p>b) Monitor learners during discussions and assess their ability to listen actively, comprehend the information, and summarise key points effectively.</p>



	<p>c) In groups, learners analyse textbooks, extracts, videos, or online sources to investigate evidence of past climatic changes and their causes. They summarise key points and present their findings in a whole-class discussion.</p>	<p>c) Evaluate learners' summaries on evidence of past climatic changes and their causes, focusing on accuracy, depth, and richness of information provided.</p>
<p>i) assess the contribution of natural processes and human activities to climate change by analysing statistics and other relevant information (u, v/a).</p> <p>j) demonstrate understanding of the effects of climate change by examining its impact on certain sectors and ecosystems (k, u, v/a)</p>	<p><b>Causes and Effects of Climate Change</b></p> <p>a) Learners brainstorm evidence of climate change in their communities, Uganda, and globally, sharing observations and discussing potential indicators.</p> <p>b) Learners engage in a discussion on the causes of current (ongoing) climatic changes, comparing them with those of past climatic changes to identify similarities and differences.</p> <p>c) Individually, learners analyse data on the causes of ongoing climate change, creating graphs, pie charts, or divided semi-circles to illustrate the contributions of various sectors and activities (e.g., agriculture, manufacturing, mining, transportation, military warfare).</p> <p>d) Drawing on their own experiences, learners discuss the impacts of climate change in Uganda, analysing various sectors to determine which are most vulnerable to its effects.</p> <p>e) Individually, learners conduct library or internet research on the global effects of climate change, writing a report that includes real-world examples to illustrate their findings.</p>	<p>a) Observe learners as they revise climate change concepts, assessing their level of environmental awareness and depth of their understanding.</p> <p>b) Observe learners during discussions and assess their ability to listen attentively, comprehend the material, and summarise key points appropriately.</p> <p>c) Evaluate learners' summaries on evidence of past climatic changes and their causes, focusing on the accuracy, detail, and richness of the information presented.</p>
<p>k) develop an action plan or manifesto to address climate change and its effects in a certain locality (u, s, gs, v/a).</p>	<p><b>Addressing Climate Change</b></p> <p>a) Write clues outlining measures to mitigate climate change and its effects, based on what learners studied at the Lower Secondary level, on the chalkboard or pieces of chart paper. Using the Carousel brainstorming technique, guide learners, working in groups, to revisit and discuss these measures.</p>	<p>a) Observe learners as they work in groups to revise the measures to mitigate climate change. Focus on the depth of their knowledge, their ability to work with others to</p>

	<p>b) Conclude the brainstorming session by leading a class discussion about the measures written on each piece of chart paper, reading what each group contributed, and answering questions as they arise.</p> <p>c) Learners use relevant departmental reports, newspaper articles, field studies or online databases, or virtual tours to research specific climate change issues affecting a particular locality (e.g., rising sea levels, flooding, mud flows, wildfires, prolonged drought, invasive species). They write a report based on their findings and present them to the class.</p> <p>d) In groups, learners prioritise and identify a key climate change issue in their locality (e.g., energy use, waste management, education, conservation efforts, and policy advocacy). They develop an action plan or manifesto to address the issue.</p> <p>e) Learners design and implement a physical or digital campaign to raise awareness about the climate change issue highlighted in the action plan/manifesto, along with the proposed solutions.</p>	<p>generate ideas, and interact effectively.</p> <p>b) During presentation of reports, probe learners to expound key points in their findings. Evaluate their ability to sort and analyse information, and to support their ideas using relevant facts and examples.</p> <p>c) Assess learners' action plan focusing on how well it spells out specific goals, actions, and timelines in line with the local context.</p>
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**TOPIC 10: Settlement and Urban Growth**

**Duration: 33 Periods**

**Competency:** The learner proposes plans for developing and re-developing settlements and their environments through collecting, processing, and analysing information about them to promote the welfare and sustainable development of their inhabitants.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Assessment Strategies</b>
a) demonstrate an understanding of settlements by examining their types, characteristics, and patterns (u, s, v/a).	<p><b>Main types and Distribution of Settlement</b></p> a) Through brainstorming, ask learners to describe where they live, focusing on characteristics of their local settlement and its surroundings. b) Learners study photographs, texts extracts, or watch a video clip showing various settlement types (rural, urban, and peri-urban). They take notes on their findings and present their observations to the class. Group ideas contribute to a whole-class discussion. c) Learners brainstorm the meaning of the term “settlement”. Guide them toward a shared understanding of the concept and its various interpretations. d) In groups, learners analyse three different topographic maps and describe the various settlement patterns (linear, nucleated, dispersed etc.). They then relate these patterns to the types of settlements they are familiar with.	a) Observe how learners listen attentively and demonstrate comprehension while watching the video, noting their engagement and understanding of the content. b) Engage learners in a conversation to assess their deeper understanding of the key concepts, probing for clarity and depth in their responses. c) Observe individual learners within groups, evaluating their ability to speak confidently, explain ideas clearly, and accurately analyse settlement patterns. d) Have a conversation with learners about the functions of settlements, using probing questions to assess the coherence, depth, and accuracy of their responses.
b) analyse the relationship between settlement and the environment in regions with contrasting physical	a) Divide learners into groups and assign each group two case studies of contrasting environments (e.g., desert vs. tropical rainforest, mountainous vs. coastal region). b) In their groups, learners research how human settlements in these environments are influenced by	a) Observe learners as they research how human settlements are influenced by physical factors, focusing on their ability to take responsibility for own learning and demonstrate initiative in the process.

<p>environments (u, v/a).</p>	<p>physical factors. They should compare aspects such as population density, housing styles, economic activities, and infrastructure development.</p> <p>c) Groups present their findings using charts, maps, or digital presentations, demonstrating how settlements adapt to the challenges of different environments.</p> <p>d) Learners analyse statistics showing the number of settlements in a specific area in Uganda. Individually, they draw a dot map to represent the distribution of settlement in that area.</p> <p>e) Organise learners to debate on the motion: <i>"Settlements are more influenced by environmental factors than human ingenuity."</i></p> <p>f) Individually, learners write post-debate essays reflecting on how both environmental factors and human innovation influence settlement patterns.</p>	<p>b) During presentation, ask learners to explain clearly how the physical environment influences settlement patterns. Assess their ability to demonstrate a deeper understanding of the topic through their explanations.</p> <p>c) Evaluate learner's dot maps for accuracy, coherence, and clarity of the information presented, ensuring that the data is represented effectively.</p> <p>d) Observe learners during the debate to assess their ability to defend their ideas with relevant context, speak confidently, express opinions clearly, and listen attentively to others while respecting different viewpoints.</p>
<p>c) analyse the changing types, patterns and functions of rural settlements in Uganda and other countries and the impacts these have on the surrounding areas (v/a).</p>	<p><b>Rural Settlement</b></p> <p>a) In groups, learners analyse photographs, diagrams, and videos of different rural settlements to identify their layout and characteristics. They classify the settlements into types, note down their findings, and present their analysis to the class for further discussion.</p> <p><b>Site and Location</b></p> <p>a) In groups, learners analyse topographic survey maps from Uganda and other areas to investigate the siting and location of rural settlements (e.g., near rivers, on fertile land, or along transport routes).</p> <p>b) Learners discuss why certain locations are more favourable for</p>	<p>a) Observe learners as they analyse photographs, texts, or videos, focusing on how well they sort, interpret, and analyse the information presented.</p> <p>b) Observe learners as they classify rural settlement into types, paying attention to their ability to identify patterns and make appropriate generalisations based on the data.</p> <p>c) Probe learners to explain and justify the classification of rural settlements they have developed. Assess how effectively they collaborate</p>

	<p>rural settlement than others. They note their findings and display their work on the classroom walls for review.</p> <p>c) Through a gallery walk, groups critique each other's work, offering necessary corrections. Through questioning and explanation, guide learners to understand the difference between <i>site</i> and <i>location</i>.</p> <p>d) In groups, learners discuss the functions of rural settlements and present their findings to the class for further discussions.</p> <p>e) Learners conduct a field study in a nearby rural settlement to investigate its impact on both the natural and human environments.</p> <p>f) In groups, learners observe and record the environmental, economic, and social impact of the settlement. They then write a group report with recommendations on how to mitigate negative impacts while enhancing positive contributions.</p> <p>g) Learners role-play as members of a rural settlement planning committee tasked with improving living conditions in a hypothetical or real settlement. They propose solutions to the challenges identified during their study.</p>	<p>with peers to generate ideas and defend their reasoning or opinions.</p> <p>d) Ask learners to explain their views on the functions of rural settlement, focusing on their ability to identify patterns and draw general conclusions from the evidence.</p> <p>e) Evaluate learners' field reports by assessing the clarity, accuracy, and logical flow of the information presented. Also, evaluate the feasibility and practicality of the recommendations they proposed for mitigating the negative impacts of settlement.</p>
<p>d) analyse the types, patterns and functions of urban settlements in Uganda and other countries, and the impact these have on the surrounding areas to make informed decisions on managing settlements (s, v/a).</p>	<p><b>Urban Settlement</b></p> <p>a) In groups, learners analyse photographs, texts, or watch videos depicting different urban settlements, and guide them to explore key characteristics for each type.</p> <p>b) In groups, learners explore case studies to analyse urban settlements and their main functions. Each group notes down their findings and presents their analysis to the class for further discussion and exploration.</p> <p>c) In groups, learners use outline maps of a city to label key zones such as CBD, industrial areas, residential zones. They explore the internal</p>	<p>a) Observe learners during group discussions and as they make classifications, focus on how effectively they identify the features of different types of urban settlements. Pay attention to their ability to listen attentively and comprehend their peers' contributions.</p> <p>b) Engage in conversations with learners during the discussions, probing them to justify their classifications of urban settlements. Assess their ability to defend their</p>

	<p>structure of urban settlements and discuss how the identified zones are arranged and examine their interrelationships.</p> <p>d) Learners conduct a field visit to a local city or take a virtual tour of a city using Google Maps to identify and observe the internal structure of the urban area, take notes, draw field sketches, and write field reports to share their findings with the class.</p> <p>e) In groups, learners analyse case studies of planned and unplanned cities. They sketch the internal structure of both planned city and an unplanned city, compare the <b>differences, and present their findings to the class to foster a discussion</b> on the characteristics of each type.</p> <p>f) Learners locate the Central Business District (CBD), Inner city and (inner and outer) suburbs of the cities or towns they are familiar with. They justify their choices based on characteristics and share their findings in a whole-class discussion.</p>	<p>reasoning and the depth of their understanding.</p> <p>c) Evaluate the labelled maps for clarity and accuracy in identifying and labelling zones like the CBD, industrial areas, and residential zones. Assess how well learners reflect the true internal structure of urban settlements.</p> <p>d) Observe learners during group discussions and as they sketch the internal structure of cities, note how effectively they identify and compare features of planned and unplanned cities. Pay attention to their ability to think critically and explore innovative ideas.</p>
<p>e) propose innovative solutions for addressing settlement-related challenges through collecting and analysing data and information about them (u, v/a).</p>	<p><b>Problems of Urban Growth</b></p> <p>a) Provide learners with printed case studies or newspaper articles on urban growth challenges in cities like Kampala or Nairobi, highlighting key issues such as housing, transport, pollution, and infrastructure.</p> <p>b) In groups, learners analyse the articles to identify specific problems resulting from urban growth. They then discuss potential solutions to these problems and present their findings to the class through a structured presentation.</p> <p>c) Organise a field trip to a local urban area where learners can observe the challenges of urban growth first</p>	<p>a) Observe learners as they collaborate to analyse articles. Pay attention to how they identify and explain urban growth problems during group discussions. Focus on their ability to extract key issues from the text and propose actionable solutions.</p> <p>b) Ask learners probing questions about the challenges they identify during the field study, assessing their ability to recognise real-life urban growth problems and provide thoughtful observations.</p>

	<p>hand. Learners should write detailed reports or create diagrams that highlight the problems they observe and propose possible solutions. Encourage them to take photographs during the trip, which can be printed and used for discussion in class.</p>	<p>c) Assess learners’ field reports, focusing on the accuracy, clarity, coherence of information, and the feasibility of the solutions they propose to address urban growth challenges.</p>
<p>f) propose a feasible land use plan to manage urban growth in a way that balances economic development, social equity, and environmental conservation (u, v/a).</p>	<p><b>Land use Planning and Control of Urban Growth</b></p> <p>a) Learners design a project for a small sustainable urban area, incorporating effective land use planning principles and strategies for controlling urban growth. They should consider factors such as zoning, green spaces, transportation, and environmental impact.</p>	<p>a) Observe groups or individual learners as they work on their designs, focusing on how effectively they apply creativity and critical thinking in exploring possibilities or sustainable urban development.</p> <p>b) Ask learners to explain their ideas for sustainable land use and growth control measures, assessing their understanding of sustainability principles and how they incorporate them into their designs.</p> <p>c) Evaluate the final design (a detailed and labelled map or drawing of the urban area), focusing on the feasibility, practicality, and logical flow of the ideas presented, ensuring that sustainability and growth control measures are appropriately addressed.</p>

**TOPIC 11: Slope Development**
**Duration: 42 Periods**

**Competency:** The learner analyses spatial and temporal variations of slope processes by examining their nature, factors influencing their occurrence and impact to devise strategies for managing slope-related hazards.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Assessment Strategies</b>
a) assess the influence of slope development on the physical environment and human activities (u).	<p><b>Theories of Slope Development</b></p> <p>a) Use diagrams, animations, or models to illustrate the theories of slope development (e.g., Davis’s cycle of erosion, Penck’s theory, and King’s slope replacement model). These resources will help learners visualise and better understand complex theoretical concepts through multimedia presentations or interactive whiteboard illustrations.</p> <p>b) Learners analyse examples of landscapes shaped by different slope development theories. They explore how each theory applies to observed features using resources such as photos, maps, and scholarly articles to enhance their understanding.</p> <p>c) Learners visit a local slope or landform to observe, document its features, and hypothesise the slope processes at work. They then relate their findings to the theories of slope development they have learned.</p> <p>d) Working in groups, learners research different theories of slope development, summarise key concepts, and create diagrams to illustrate each theory. They present their findings to the class, contributing to a broader understanding of slope development.</p> <p>e) Learners examine unlabelled diagrams or cross-sections of slopes to identify the processes depicted. They match the features with the relevant theories of slope</p>	<p>a) Assess learners’ research reports for accuracy, clarity, and the effective use of illustrations to explain landform evolution. Focus on how well learners integrate visual aids to support their explanations and understanding of the concepts.</p> <p>b) During presentations, assess the logical progression of learners’ reasoning and the clarity of their explanations.</p> <p>c) Evaluate learners’ findings on the local slope, assessing the accuracy of the information presented. Focus on the evidence they use to relate observed slope processes to the relevant theory of slope development, ensuring that their connections are well-supported and sound.</p>



	<p>development, deepening their analytical skills.</p> <p>f) Learners engage in a debate about the applicability of various slope development theories in different environments (e.g., humid vs. arid). Through a guided discussion, help learners critically assess the strengths and limitations of each theory in real-world contexts.</p> <p>g) Present learners with a problem scenario, such as predicting slope evolution in an area prone to erosion. Learners propose solutions based on their understanding of slope development theories, encourage them to apply theoretical knowledge to practical situations.</p>	
<p>b) appraise programs and actions aimed at mitigating and responding to occurrence of mass wasting in the highland areas of Uganda and the rest of East Africa (u, v/a).</p>	<p><b>Types and Processes of Mass Wasting</b></p> <p>a) Use documentaries, YouTube channels, or Geographic Information System (GIS) visualizations of mass wasting events to illustrate various types of mass wasting processes. This will help learners visualise the processes and understand their distinguishing features in real-life contexts.</p> <p>b) Organise a field visit to a site with visible evidence of mass wasting (e.g., scars from landslides or talus slopes). Learners document the features and processes through sketches, notes, and photographs, linking observations to the types of mass wasting they have learned.</p> <p>c) In groups, learners research a specific type of mass wasting (e.g., soil creep, slumping, debris flow). Each group writes a detailed report with relevant diagrams and presents their findings to the class, explaining the causes, effects, and environmental implications.</p> <p>d) Learners role-play as geologists or environmental managers tasked with</p>	<p>a) Assess learners' fieldwork reports for the correct use of geographic terminology, clarity in diagrammatic illustrations, and the ability to effectively link their observations to types and processes of mass wasting.</p> <p>b) Observe learners during the role play, focusing on their ability to identify mass wasting risks, propose realistic solutions, and communicate their ideas effectively.</p> <p>c) Ask learners to explain whether the area where their school is located is prone to mass wasting. Assess their level of</p>

	<p>assessing mass wasting risks in a hypothetical area. They propose mitigation strategies based on the identified risks and make recommendations for preventing future events.</p> <p>e) Present case studies of significant mass wasting events (e.g. the Oso landslide in the USA or mudslides in Sierra Leone). Learners analyse the causes, effects, and response measures taken, critically evaluating the effectiveness of each response.</p> <p>f) Learners simulate mass wasting using sand, soil, water, and inclined trays to demonstrate how factors like slope angle and moisture content influence mass wasting.</p>	<p>environmental awareness and evaluate how logically they link their explanation to climatic, relief, and human factors that can trigger mass movement.</p>
<p>c) predict the occurrence of mass wasting in highland areas by analysing and applying the relevant geographical information (v/a).</p>	<p><b>Effects of Mass Wasting</b></p> <p>a) Provide case studies of mass wasting events from both humid and arid regions. Learners analyse the causes, effects, and responses to these events, comparing the differences between regions.</p> <p>b) Use software or online tools to create interactive models of slope failure and mass wasting events. Allow learners to manipulate variables in simulations to observe how changes impact slope stability and mass wasting.</p> <p>c) Learners conduct a field study of highland areas or slopes where signs of mass wasting are visible. Guide them in making detailed observations, taking measurements, and recording data on slope stability and mass wasting indicators.</p> <p>d) Assign group projects where learners predict and analyse potential mass wasting events by gathering and synthesising information from various sources, such as topographic maps, photographs, and field data. Groups present their findings and propose sustainable management strategies for mitigating risks.</p>	<p>a) Observe learners during presentations, focusing on the content, organisation, clarity of communication, and their ability to use appropriate gestures to engage the audience.</p> <p>b) Engage in a conversation with learners during the fieldwork activities, assessing the clarity, accuracy, and depth of their explanations as they actively participate in hands-on tasks.</p> <p>c) Continuously assess learners' project work, paying particular attention to their ability to collaborate within teams, plan effectively, conduct investigations, handle feedback constructively, and</p>

	<p>e) Learners participate in a debate on the impact of mass wasting on landscapes, ecosystems and human activities. Present different viewpoints and real-life scenarios for learners to explore during the debate.</p>	<p>maintain a positive attitude throughout the process.</p>
<p>d) propose strategies for preventing mass wasting in the highland areas of Uganda by applying relevant information (v/a).</p>	<p><b>Measures to Control Mass Wasting</b></p> <p>a) In groups, learners research case studies of successful mass wasting control measures using the internet or textbooks. They analyse the effectiveness of the different strategies and discuss their strengths and limitations.</p> <p>b) Use diagrams and models to illustrate various mass wasting control techniques. Demonstrate how different measures, such as terracing, retaining walls, and vegetation cover, help stabilise slopes. Learners design their own models or diagrams using low-cost, accessible materials.</p> <p>c) Organise a field trip to a local area where mass wasting control measures are in place. Learners observe, document, and critically evaluate the effectiveness of these measures, discussing possible improvements.</p> <p>d) Provide learners with maps and data of a highland area prone to mass wasting. Task them with proposing sustainable control measures, considering cost-benefit analysis and environmental impact assessments. Learners present their proposals through reports, charts, or presentations.</p>	<p>a) Observe learners as they design their models using low-cost materials. Engage them in discussions about their design choices and encourage peer assessment to promote collaborative learning and critical feedback.</p> <p>b) Hold discussions with learners during the field study. Use rubrics to assess the accuracy, clarity, and depth of their observations and documentation.</p> <p>c) Evaluate learners' diagrams and models, focusing on their effectiveness in illustrating real-world situations and processes. Assess their ability to use creativity and problem-solving skills in exploring possible solutions.</p>

**TOPIC 12: Problems of Food Supply**
**Duration:** 24 Periods

**Competency:** The learner analyses local and global food supply problems as well as strategies adopted to address them using relevant information and geographic tools, and proposes innovative solutions to ensure food security for all.

Learning Outcomes The learner should be able to:	Suggested Learning Activities	Sample Assessment Strategies
a) examine the relationship between the level of economic development and food supply in a country or region by using statistics and other information (s, gs, v/a).	<b>Trends in World Food Supply</b> a) In groups, learners analyse texts, graphs, and statistical data on global and regional trends in food production and supply. They identify regions with high food surpluses and deficits and present their findings, using charts, maps, or digital presentations. b) Group findings contribute to a whole-class discussion, where learners compare trends, debate causes of disparities, and explore possible solutions to food distributions challenges. c) In groups, learners categorise countries and regions based on food surplus or deficit and their levels of economic development. They organise their findings in a well-structured table and justify their classifications with relevant data.	a) Observe learners as they analyse texts, graphs, and statistics, focusing on their ability to identify global trends and patterns in food supply. Look for evidence of critical thinking and data interpretation skills. b) Engage learners in discussions, prompting them to explain their findings clearly and justify their conclusions with relevant evidence from the data. c) Assess learners' categorisation of countries based on food production and economic development, assessing the accuracy of information, logical reasoning, and ability to make meaningful connections between food supply and economic status.
b) demonstrate an understanding of food shortages in Sub-Saharan Africa and other developing countries by	<b>Food Shortages in Developing Countries</b> a) Use guided questioning to help learners assess the food supply situation in their community, district, and Uganda as a whole.	a) Assess learners' evaluation of the food supply situation, paying attention to their level of awareness and ability to analyse conditions in their local community.

<p>using relevant information (u).</p>	<p>b) In a discussion, learners account for the level of food supply situation in their own community, district and Uganda.</p> <p>c) In groups or pairs, learners research books, magazines, and newspaper, or credible online sources to gather information on food shortages in Sub-Saharan Africa. They identify affected countries and analyse the underlying causes of food shortages in the region.</p> <p>d) Guide learners in brainstorming the challenges linked to declining food supply in Sub-Saharan Africa, encouraging them to consider social, economic, and environmental factors.</p> <p>e) Learners conduct library or internet research to analyse two case studies of countries outside Africa experiencing food shortages. They write reports and present their findings in a whole-class discussion.</p> <p>f) In groups, learners identify and classify different forms of food shortages affecting Africa and other developing regions, discussing appropriate terminology to describe these conditions.</p>	<p>b) Engage learners in a discussion about food supply in Uganda. Ask them to justify their stance on whether Uganda experiences famine, evaluating their ability to provide logical arguments and supporting evidence.</p> <p>c) Observe learners during their presentations and discussions, focusing on their organisation, and analytical skills, ability to sort and interpret information, and respect for diverse viewpoints.</p>
<p>c) evaluate policies and programmes aimed at increasing food supplies in Uganda and other developing countries (v/a).</p>	<p><b>Addressing Food Shortages</b></p> <p>a) Learners brainstorm practical strategies to ensure adequate food supply at the family and community level, considering local resources and challenges.</p> <p>b) In groups, learners discuss and propose measures to address food shortages in Sub-Saharan Africa, evaluating their feasibility and sustainability.</p> <p>c) Learners conduct library or internet research on initiatives aimed at ending food shortages in Sub-Saharan Africa and other developing countries. They assess the effectiveness of these efforts and compile their findings into reports, which are later shared in a whole-class discussion.</p>	<p>a) <b>Observe learners as they discuss strategies</b> for addressing food shortages in Sub-Saharan Africa, assessing their ability to propose realistic and sustainable solutions to real-world challenges.</p> <p>b) Engage learners in discussions, prompting them to elaborate on their ideas and evaluating their clarity, depth of reasoning, and ability to justify their viewpoints.</p> <p>c) Assess learners' written reports, focusing on the relevance, accuracy, and</p>

		coherence of the information presented.
d) develop an action plan or manifesto for addressing food shortages in Africa or any other area based on the causes and effects of the situation. (gs, v/a)	a) Learners participate in a project on strengthening /consolidating food security in a specified local area.	<p>a) Assess learners' project work throughout the process, paying special attention to their ability to:</p> <ul style="list-style-type: none"> <li>i) work independently with persistence.</li> <li>ii) manage goals and time.</li> <li>iii) use a range of media to communicate ideas.</li> <li>iv) collaborate to generate ideas.</li> <li>v) identify problems and proposed actionable solutions.</li> <li>vi) evaluate different solutions.</li> </ul>

**TOPIC 13: Lake and Sea Coasts**

**Duration:** 42 Periods

**Competency:** The learner demonstrates appreciation of coasts as dynamic physical environments through examining their nature, geomorphic processes modifying them, and resultant features, as well as benefits and challenges of living in coastal areas to inform decisions aimed at developing such areas.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Strategies</b>	<b>Assessment</b>
a) analyse the formation and characteristics of coastal landforms and evaluate their significance in shaping coastal landscapes over time (u).	<p><b>Waves and Their Nature</b></p> <ul style="list-style-type: none"> <li>a) Guide learners in a brainstorming session to revise the nature and characteristics of coasts as changing landscapes affected by wave action, tidal influence, sediment transport and human activities.</li> <li>b) Using the jigsaw method, learners collaboratively investigate wave action, tidal influence, sediment transport, and human activities shaping coasts, and then integrate their findings to build a comprehensive understanding of coastal dynamics.</li> <li>c) In groups, learners conduct online or library research on other factors affecting the development of coastal landforms and features, compile a report, and present them to the class.</li> </ul>	<ul style="list-style-type: none"> <li>a) Observe learners during the jigsaw activity, assessing their ability to collaborate and synthesise findings on wave action, tidal influence, sediment transport, and human impact.</li> <li>b) Engage learners in discussions during group presentations, probing their understanding of how these factors interact to shape coastal landscapes.</li> <li>c) Evaluate learners' concept maps and group summaries for clarity, accuracy, and depth of analysis.</li> </ul>	
	<p><b>Landforms Due to Wave Action Along the Coast</b></p> <ul style="list-style-type: none"> <li>a) Through questioning, guide learners to revise the coastal landforms they studied in the Lower Secondary level.</li> <li>b) Provide them with photographs and maps of a coastal area (real or hypothetical, such as Lake Victoria's shores or oceanic coasts).</li> <li>c) Learners create a concept map linking wave processes (e.g., hydraulic action, abrasion) to specific landforms and their features. They annotate it with examples and significance.</li> </ul>	<ul style="list-style-type: none"> <li>a) Observe learners as they create and annotate concept maps, focusing on their ability to link processes like hydraulic action and abrasion to specific landforms.</li> <li>b) Engage learners during discussions on the significance of coastal landforms for development, probing their understanding of the connection between</li> </ul>	

	<p>d) Learners then develop a detailed resource map that highlights opportunities for development, such as ecotourism or aquaculture.</p>	<p>physical processes and human use.</p> <p>c) Assess resource maps and presentations for accuracy, creativity, and application of geographic knowledge.</p>
<p>b) predict the future relationship between land and sea or lake coast, using knowledge of current crustal stability and ongoing climate change, to raise awareness about natural hazards affecting coastal areas (v/a).</p>	<p><b>Lake and Sea Level Changes (Eustatic Adjustment)</b></p> <p>a) In groups, learners read and analyse articles (in print, digital form) on sea level changes, including their types, causes, effects, and importance. Each group summarises the key points and creates a fact sheet or infographic to present to the class.</p> <p>b) As a whole class, learners discuss and categorise the causes into natural and human-induced factors, exploring these relate to climate change.</p> <p>c) In groups, learners search textbooks, the internet, or videos to analyse case studies of effects of sea/lake level changes on specific regions (e.g., deltas, island nations). They write a report on their findings and share it with the class for discussion.</p> <p>b. Guide learners to conduct a debate on the importance of understanding sea level changes, using evidence from the articles to argue whether mitigation or adaptation should take priority in addressing the issue.</p> <p>c. Learners write a reflective essay on how sea/lake level changes affect their region or country, proposing strategies to address related challenges and opportunities.</p>	<p>a) Observe learners during the discussion and debate, focusing on their ability to listen attentively with comprehension, think and reason objectively, and how well they can defend their opinions.</p> <p>b) Evaluate learners' reports on the effects of sea/lake level changes on named regions for accuracy of geographical facts, depth of analysis, and ability to use illustrations to clarify written information.</p> <p>c) Ask learners to explain their reflective essay on how sea/lake level changes affect their region or country. Note their ability to express their ideas clearly and <b>logically and how well they can sort the pros and cons of natural geomorphic events.</b></p>
<p>c) analyse the resource potential associated with coastal landforms and how this can be tapped for</p>	<p><b>Influence of Coasts on Human Activities</b></p> <p>a) In groups, learners create a presentation or an infographic that highlights the key resources, their uses and sustainable management practices.</p> <p>b) In groups, learners share their findings and explore how different coastal</p>	<p>a) Observe group research activities, focusing on their use of resources (e.g., maps, case studies) and collaboration.</p> <p>b) Observe group presentations, focusing on their ability to justify their</p>



<p>development (v/a).</p> <p>d) propose a plan for developing a coast based on its actual and potential resources and challenges as a way of facilitating resource utilisation and community development (s, gs).</p>	<p>landforms support development in various regions.</p> <p>c) In groups, learners critically assess the economic, environmental, and social benefits and challenges of utilising these resources.</p> <p>d) Individually, learners write a report or essay on how one specific coastal landform and its resources can be sustainably developed to benefit a local or national economy.</p>	<p>proposed strategies for sustainable development and how to address challenges related to resource use.</p> <p>c) Assess each group presentation, infographics, and individual essays on:</p> <ul style="list-style-type: none"> <li>i) depth of resource analysis.</li> <li>ii) feasibility and sustainability of proposed strategies.</li> <li>iii) creativity.</li> <li>iv) clarity of communication.</li> </ul>
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## Topic 14: Utilisation and Conservation of Natural Resources

**Duration:** 48 Periods

**Competency:** The learner evaluates efforts aimed at conserving natural resources by examining their effectiveness as a basis for recommending alternative strategies to ensure wise and sustainable use of resources.

<b>Learning Outcomes</b> The learner should be able to:	<b>Suggested Learning Activities</b>	<b>Sample Assessment Strategies</b>
a) demonstrate an understanding of natural resources by explaining their nature and their characteristics to devise ways of using them wisely (s, gs, v/a).	<p><b>Resources and their Nature</b></p> a) Through questioning and discussion, learners identify and generate a list of resources around the school and in their home areas. They describe the characteristics of each resource and give reasons why they think it is a resource. b) Through probing and explanation, guide learners to understand the meaning of resources and how the status of a resource varies in space and time. c) Learners categorise the resources listed as natural or human and give reasons to justify their categorisation of each resource. d) Guide learners to use their background knowledge to identify other natural resources in Uganda other than those identified above. e) Using topographic survey maps from different areas or atlas, textbook, maps, or digital maps, learners locate Uganda's natural resources. They draw a map showing the distribution of natural resources in the country and annotate it. f) Drawing on their experiences and knowledge acquired in other topics, learners discuss the various ways the people of Uganda make use of each resource. Then, they identify the challenges facing effective utilisation of some of the natural resources. g) Individually, learners summarise the main issues raised in the discussion.	a) Observe learners as they engage with maps, focusing on their ability to read and use maps to construct the geography of an area. b) In a conversation, ask learners to explain their categorisation of resources and note their ability to account for and justify their actions. c) Assess learners' tables and maps for the drawing skills, accuracy of facts, richness and coherence of information. d) Observe learners as they discuss and make notes, focusing on their ability to follow the thread of a discussion to make appropriate contribution.
b) assess the stock of resources in an	a) In pairs or groups, learners analyse texts, photographs, maps or documentaries	a) Observe learners as they work in groups to

<p>area or country through applying relevant information and geographical tools (k, u, s, gs).</p>	<p>about countries or regions in contrasting geographical settings and at different levels of development (e.g. Japan and the Congo Basin; Switzerland, and the Amazon Basin). They explore the natural resources available in these areas.</p> <p>b) Learners investigate how the case study areas are using their natural resources for development, factors affecting resource utilisation, and challenges being faced. They write down their findings and share their write-ups with the rest of the class.</p> <p>c) In a whole-class discussion, learners explore lessons Uganda can learn from the case studies to promote effective and sustainable utilisation of her resources.</p> <p>d) Learners conduct a debate on the relationship between the stock of natural resources at a nation's or region's exposure and the level of economic development.</p>	<p>analyse the various sources of information. Note their ability to encourage each other to contribute effectively and to turn diverse viewpoints into shared solutions to the problem at hand.</p> <p>b) In a conversation, probe learners to categorise the factors and challenges affecting the utilisation of natural resources and to assess the significance of each category. Focus on their ability to sort and analyse information, and to try out innovative alternatives.</p> <p>c) Evaluate learners' submissions during the debate, paying special attention to the depth and maturity of their reasoning and ability to recognise the role of questioning in developing ideas.</p>
<p>c) demonstrate appreciation of wetlands as a critical resource by examining their nature, environmental and socio-economic roles, and challenges of conserving them to argue out a case for using</p>	<p><b>Sustainable Utilisation of Wetlands</b></p> <p>a) Learners visit a nearby wetland (swamp, marsh or bog) to investigate its location, factors influencing its existence, characteristics, and importance to the people, and environment. They take pictures, draw a panorama and other field sketches, write reports and share their findings during the follow-up session.</p> <p>b) Using their field findings and other relevant knowledge, learners collaboratively explain what is meant by a wetland. Through discussions and explanations, guide learners to come up</p>	<p>a) Observe learners as they collect data in the field. Note how well they respect the environment and their ability to plan and conduct an investigation.</p> <p>b) Probe learners as they contribute to the meaning and description of a wetland. Focus on their ability to derive meanings from</p>

<p>them sustainably (u, gs, v/a).</p>	<p>with a broad meaning and description by spelling out the drainage conditions, location, and the nature of plant and animal life that characterise wetlands.</p>	<p>local contexts and view concepts in a broader perspective.</p> <p>c) Assess learners' field sketches and write-ups for details, drawing skill, and ability to use a range of media to communicate the geography of an area.</p>
	<p><b>Types and Status of Wetlands in Uganda</b></p> <p>a) Learners research a general atlas, textbooks, topographic survey maps, or the Uganda Wetland Atlas to investigate the kind of places in which wetlands commonly occur. They draw a map to show the distribution and types of wetlands in Uganda.</p> <p>b) Learners analyse texts explaining the types of wetlands and make detailed notes.</p> <p>c) Learners research textbooks, atlas, ministerial reports, newspaper articles, or the internet for statistics about wetlands for the past four decades.</p> <p>d) Individually, learners draw charts, graphs, and other statistical drawings to represent the statistical data.</p> <p>e) Learners analyse the trends in wetland coverage, and suggest possible reasons for the pattern displayed.</p> <p>f) Using the same statistics, and other relevant information, learners describe the current status of wetlands in Uganda.</p> <p>g) Based on the trends and current status, learners discuss and project the status of wetland in Uganda over the next 50 years and its implications to the environment.</p>	<p>a) Observe learners as they analyse the atlas, texts, and topographic survey maps, noting their ability find appropriate points in a text or graphic material to summarise.</p> <p>b) Ask learners to clarify their classification of wetlands. Note how well they relate types to the location and characteristics of the wetlands.</p> <p>c) Evaluate learners' statistical drawings and notes that explain trends and the current status of wetland coverage in Uganda. Focus on their accuracy in using numbers and measurements and their ability to interpret and critically analyse mathematical data.</p> <p>d) Listen to learners' as they project the status of wetlands in Uganda over the next 50 years and discuss its implications for the environment. Assess their ability to use mathematical reasoning and evidence to support and justify their projections.</p>

	<p><b>The value of Wetlands</b></p> <p>a) Drawing on their fieldwork findings, personal experiences, and other relevant knowledge, learners brainstorm the environmental, social, and economic value of wetlands. They summarise the contributions of wetlands.</p> <p>b) Learners research textbooks, magazines, newspaper, or digital sources for the importance/value and disadvantages of wetlands in Uganda. They write reports and make presentations that would contribute to a whole-class discussion.</p> <p>c) Learners compare their findings with the ideas they raised during the brainstorming session.</p>	<p>a) Listen to learners' contributions during the brainstorming session, noting their level of environmental awareness and ability to recognise wetlands as a resource.</p> <p>b) Observe learners during presentations and discussions. Note how well they can analyse the importance of wetlands by pointing out pros and cons.</p>
<p>d) evaluate policies and efforts put in place to protect wetlands by examining the causes and effects of wetland destruction, and the effectiveness of measures aimed at addressing wetland loss to devise more effective solutions (u, s, gs, v/a).</p>	<p><b>Destruction of Wetlands</b></p> <p>a) In groups, learners discuss the various ways in which wetlands in their community and district are being destroyed. They discuss the main drivers and causes of wetland destruction. They then write their views and share them using a jigsaw.</p> <p>b) Individually or in pairs, learners analyse photographs, texts, or videos on land use in wetlands and destruction of wetlands. They summarise the drivers and cause of wetland loss in Uganda, and share their findings in a whole-class discussion.</p> <p>c) Learners compare their findings with the ideas they raised during group and whole class discussion and finetune their notes.</p> <p>d) Learners analyse statistics showing wetland loss by region, drainage basin, or land use. They draw comparative graphs, pie-charts and choropleth maps to analyse the data. They write notes to compare and explain wetland degradation as displayed by the statistics and drawings.</p> <p>e) In a discussion, learners assess the relative contribution of the various human</p>	<p>a) Listen to learners' contributions to the causes and drivers of wetland destruction in their locality. Evaluate their ability to cite local example to support their ideas.</p> <p>b) Ask learners to expound on the relative contribution of the human activities to wetland destruction. Evaluate their ability to apportion responsibility for the wrongs committed, and the fairness with which they judge others.</p> <p>c) Assess learners' report on the effects of wetland destruction. Note their ability to look at issues in a broader perspective, such as effects on ecosystems, climate and humans.</p>

	<p>activities to wetland destruction and derive conclusions.</p> <p>f) Individually, learners carry out library or internet research on the effects of wetland destruction. They write a report and illustrate it with relevant examples.</p>	
	<p><b>Measures to Promote Sustainable Use of Wetlands</b></p> <p>a) In groups, learners read newspaper articles, magazines and state of the environment reports for Uganda (NEMA), or research the Internet for policies, laws, treaties and programmes being implemented to promote sustainable utilisation and management of wetlands in Uganda. They examine the achievements so far realised and the challenges faced.</p> <p>b) Individually, learners conduct research to analyse <b>two</b> case studies on sustainable utilisation and management of wetland resources in other countries (e.g., India, USA, Canada). They write reports and share their findings through class presentations and discussions.</p> <p>c) In a whole-class discussion, learners compare the measures implemented by the case study countries with those used in Uganda. They identify lessons Uganda can learn from the case study countries.</p> <p>d) Learners participate in a project to restore a degraded wetland or to protect a normal wetland against degradation.</p>	<p>a) Observe learners as they analyse the different sources for information about measures taken to protect wetlands. Note how effectively they interact and recognise the value of others' ideas.</p> <p>b) Ask learners to explain the extent to which the legal framework for managing wetlands resources has been successful. Focus on their ability to evaluate policies by forming and defending their own opinions.</p> <p>c) Evaluate learners' reports about case studies, paying attention to their ability to write and present information coherently and to use a range of media to communicate ideas.</p> <p>d) Assess learners' project work at every stage, focusing on their ability to:</p> <ul style="list-style-type: none"> <li>i) Plan and carry out investigations,</li> <li>ii) Identify problems and ways forward,</li> <li>iii) Try out innovative alternative,</li> </ul>

		<ul style="list-style-type: none"> <li>iv) Work independently with persistence,</li> <li>v) Respect the environment.</li> </ul>
<p>e) devise ways of addressing environmental degradation and its effects by analysing its types and causes to promote sustainable socio-economic development (u, gs, v/a).</p>	<p><b>Environmental Degradation and Conservation</b></p> <ul style="list-style-type: none"> <li>a) Drawing on their own knowledge and life experiences, learners brainstorm the different forms of environmental degradation and their causes.</li> <li>b) In groups, learners analyse extracts, textbooks, newspaper articles, or videos on environmental degradation in Uganda. They summarise the main types, causes and effects of environmental degradation and share as whole class for discussion.</li> <li>c) Individually, learners analyse statistics about the different forms of environmental degradation. They draw pie charts and graphs to represent the data, analyse the trends, and predict future trends.</li> <li>d) Learners analyse case studies of environmental degradation in developed and developing countries. They compare the types, causes, effects, and measures put in place to address environmental degradation in the case study areas.</li> <li>e) Through group discussions, learners suggest measures which can be taken to address environmental degradation and its effects in their communities and the rest of Uganda. Groups share their findings using the jigsaw technique.</li> </ul>	<ul style="list-style-type: none"> <li>a) Observe learners during the brainstorming session. Note their level of environmental awareness and ability to present their ideas clearly and logically.</li> <li>b) Evaluate learners' suggestions to address environmental degradation, focusing on their ability to suggest and develop new solutions, and the feasibility of their solutions.</li> <li>c) Ask learners to explain their prediction of future trends of environmental degradation, noting how well they can interpret and interrogate mathematical data; as well as, look for patterns and make generalisations.</li> </ul>

## 3.0 ASSESSMENT

### 3.1 Assessing Geography

This Advanced Secondary Curriculum sets new expectations for learning, with a shift from Objectives to Learning Outcomes that focus mainly on the application of knowledge and deeper learning that leads to the acquisition of skills. These Learning Outcomes require a different approach to assessment. The “Learning Outcomes” in the syllabi are set out in terms of Knowledge, Understanding, Skills, Values and Attitudes. This is what is referred to by the letters k, u, s v & a.

It is not possible to assess values and attitudes in the same way as knowledge, understanding, and skills because they are more personal and variable, and are long-term aspirations. This does not mean that values and attitudes are not important or cannot be assessed. They too can be assessed but not easily done through tests and examinations. Values and attitudes can be assessed over a period of time through observing and having interactions with the learner.

To assess knowledge and its application, understanding, and skills, we need to look for different things. Knowledge can be assessed to some extent through written tests, but the assessment of skills, application of what is learnt, and deeper understanding requires different approaches. Because of this, the role of the teacher in assessment becomes much more important. This section focuses on knowledge, understanding, and skills.

### 3.2 Formative Assessment

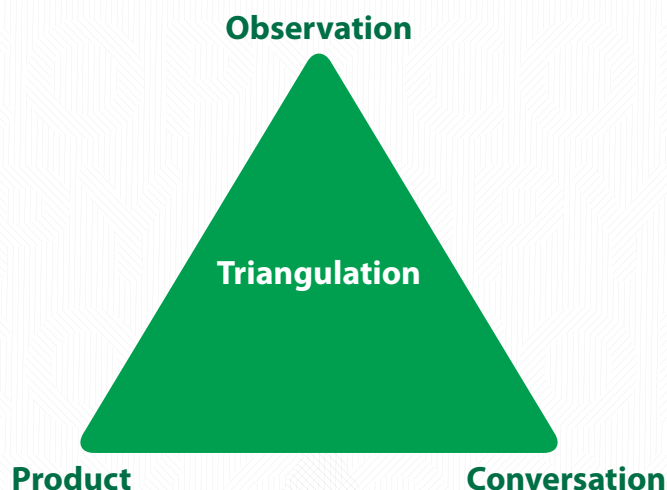
In this curriculum, the teacher’s role in assessment is not only to write tests for the learner but also to make a professional judgment about the learner’s learning during the teaching and learning process. The professional judgment is about how far the learner achieves the Learning Outcomes that are set out in this syllabus. To make these judgments the teacher needs to look at how well the learner is performing in terms of each Learning Outcome

Formative assessment opportunities occur in three forms:

1. **Observation** – Watching learners as they work, which is effective for assessing skills, values, and attitudes.
2. **Conversation** – Engaging in dialogue with learners through questioning and discussion, which is ideal for assessing knowledge and understanding.
3. **Product** – Reviewing the learner’s work (e.g., writing, reports, calculations, presentations, maps, diagrams, models, drawings, paintings), which serves as a tangible, lasting piece of evidence of learning.



When all the three forms are used, the information gathered can be cross-checked to ensure reliability. For example, evidence from **observation** can be validated by comparing it with evidence from **conversation** and **product**. This process is commonly known as **triangulation**.



### 3.3 Assessing Generic Skills

Generic Skills are integrated into the syllabuses and are part of the Learning Outcomes. Therefore, there is no need to assess them separately. The increasing complexity of subject content fosters the progression of these skills, and they are assessed as part of the subject-specific Learning Outcomes. The assessment of generic skills is supported through observation checklists and scoring rubrics.

### 3.4 Assessing Values/Attitudes

Assessing values and attitudes differs from evaluating knowledge, understanding, and skills, as they are personal, variable, and long-term aspirations. This does not diminish their importance; rather, it highlights that they cannot easily be assessed through tests and examinations. Values and attitudes can be assessed over time through ongoing observation and interaction with learners.

### 3.5 Assessment of Project-based Learning

Project-based learning is a teaching method where learners gain knowledge and skills by engaging in extended inquiry to address an authentic challenge. The task must be driven by a central question, and it involves sustained investigation.

Project-based learning is assessed using rubrics and observation checklists to evaluate how well learners engage with the project, their problem-solving abilities, and the final outcomes.

### 3.6 Examinations

There will be one school-based summative assessment at the end of the year. Traditional end of term examinations and tests will no longer be administered. Instead, assessments will focus on ongoing teacher evaluations based on the Activities of Integration. Learners will also undergo the End of Cycle Assessment for certification, with further details provided in the assessment guidelines document.

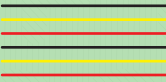
### 3.7 Record Keeping

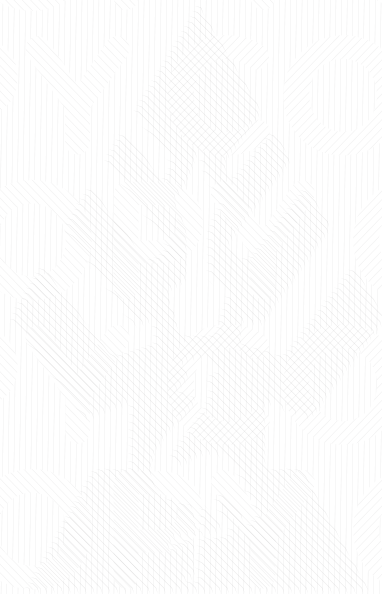
In competency-based learning, maintaining accurate and comprehensive records is essential for tracking learners' progress and achievements. Teachers and schools are responsible for keeping precise records of learners' performance. Various assessment tools, such as observation checklists, rubrics, and scoring grids, are employed to capture learners' abilities and achievements, providing a comprehensive picture of their strengths, weaknesses, and areas for improvement.

The data and evidence gathered from these assessments should be correctly recorded and maintained in learners' files, portfolios, and anecdotal notes to support their ongoing development.

## Glossary of Key Terms

Term	Definition
<b>competency curriculum</b>	One in which learners develop the ability to apply their learning with confidence in a range of situations.
<b>differentiation</b>	The design or adaptation of learning experiences to suit an individual learner's needs, strengths, preferences, and abilities.
<b>formative assessment</b>	The process of judging a learner's performance, by interpreting the responses to tasks, in order to gauge progress and inform subsequent learning steps.
<b>generic skills</b>	Skills which are deployed in all subjects, and which enhance the learning of those subjects. These skills also equip young people for work and for life.
<b>inclusion</b>	An approach to planning learning experiences which allows each learner to feel confident, respected and safe and equipped to learn at his or her full potential.
<b>learning outcome</b>	A statement which specifies what the learner should know, understand, or be able to do within a particular aspect of a subject.
<b>process skill</b>	A capability acquired by following the programme of study in a particular subject; enables a learner to apply the knowledge and understanding of the Learning Area.
<b>sample assessment activity</b>	An activity which gives a learner the opportunity to show the extent to which s/he has achieved the Learning Outcomes. This is usually part of the normal teaching and learning process, and not something extra at the end of a topic.
<b>suggested learning activity</b>	An aspect of the normal teaching and learning process that will enable a formative assessment to be made.









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