THE REPUBLIC OF UGANDA

Ministry of Education and Sports

Lower Secondary Curriculum

GEOGRAPHY SYLLABUS

NCDC
NATIONAL CURRICULUM DEVELOPMENT CENTRE

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INTRODUCTION

The UNESCO Education Strategy (2014 – 2021) advocates for a humanistic and holistic vision of education as a fundamental human right that is essential to personal and socio-economic development. UNESCO further recommends, societies that are just, inclusive, peaceful and sustainable by 2030. The Uganda Vision 2040 aims to transform Uganda into a modern and prosperous country, while the NDP recognises the existing weaknesses in education, including the low efficiency and variable quality at the secondary level. The Sustainable Development Goal 4 advocates for inclusive and quality education, while the National Development Plan II focuses on enhancement of human capital, development, strengthening mechanisms for quality, effective efficient service delivery and improvement of quality and relevance of skills development. The NRM Manifesto (2016-2021), emphasises continuous assessment examination systems , strengthening soft skills, which promote self-esteem, conscientiousness and a generally positive attitude to work, promoting e-learning and computer literacy in order to enhance learning outcomes. All these are lacking and where they exist it is at a minimum level.

In alignment with the above, the Education and Sports Sector Strategic plan (2017/20) advocates for delivery of equitable, relevant and quality education for all. The current secondary school curriculum of Uganda, although highly regarded by some, is focused on the needs of a tiny academically oriented elite yet the needs of the majority of learners need to be the focus. The Ministry of Education and Sports (MoES) through the National Curriculum Development Centre (NCDC) therefore, undertook a review of the Lower Secondary Curriculum, aimed at providing a learning environment, opportunities, interactions, tasks and instructions that foster deep learning by putting the learner at the centre of the learning experience. This is in line with aims of secondary education in Uganda as outlined opposite.

The aims of secondary education in Uganda are to:

- Instill 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;
- Promote an appreciation and understanding of the cultural heritage of Uganda including its languages;
- Impart and promote a sense of self discipline, ethical and spiritual values, personal and collective responsibility and initiative;

- Enable individuals to acquire and develop knowledge and an understanding of emerging needs of society and the economy;
- 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;
- Enable individuals to develop basic scientific, technological, technical, agricultural and commercial skills required for self-employment;
- 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 are obtained through games, sports, societies and clubs;
- Lay the foundation for further education;
- 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;
- Instill positive attitudes towards productive work and strong respect for the dignity of labour and those who engage in productive labour activities;
- Develop a positive attitude towards learning as a lifelong process.

BACKGROUND TO THE NEW CURRICULUM

The reform was based on the Education Sector Strategic Plan (ESSP), 2009 – 2018) which set out strategies to improve the quality and relevance of secondary education. The ESSP's sub-objective 2.2 was to ensure that "Post-primary students [are] prepared to enter the workforce and higher education". This is also in line with the current strategic plan of 2017-2020. To achieve this objective, one of the Ministry's strategies was to revise the curriculum and improve instruction and assessment by eliminating the short comings in the current curriculum.

The review focused on: producing a secondary school graduate who has the competences that are required in the 21st century; promoting values and attitudes; effective learning and acquisition of skills in order to reduce unemployment among school graduates.

The reform also aimed at reducing the content overload and contact hours in the classroom so as to create time for: research and project work; talent development and creativity; allowing for emerging fields of knowledge across all subjects and doing away with obsolete information. There was a need to address the social and economic needs of the country like the mining sector, tourism, services provision, science and technology development and to ensure rigorous career guidance programme to expose learners to the related subjects. This will enable learners to make informed choices as they transit and to equip them with knowledge and skills that will enhance their competitiveness in the global value chain.

To meet these requirements, the reforms are based on:

- The development of a holistic education for personal and national development based on clear shared values
- A commitment to higher standards, deeper understanding and greater opportunities for learners to succeed
- A focus on the key skills that are essential to work, to learning, and to life, and which will promote life-long learning
- An integrated and inclusive approach that will develop the ability to apply learning in practical situations.

The ESSP further outlines what the reforms imply:

"This reform will necessitate a sweeping revision of the general secondary curriculum, away from strictly academic learning objectives that are thought to prepare students for erudite higher education and towards a set of competencies that serve both those who continue their education after S4 and those who choose to enter the workforce. The new curriculum will enable learners to acquire specific vocational skills that they can use once they enter the world of work. The new curriculum will help learners make informed decisions as citizens and family members, and it will give those who continue with their education, either immediately in S5 or later in life, the learning skills they need to think critically and study efficiently."

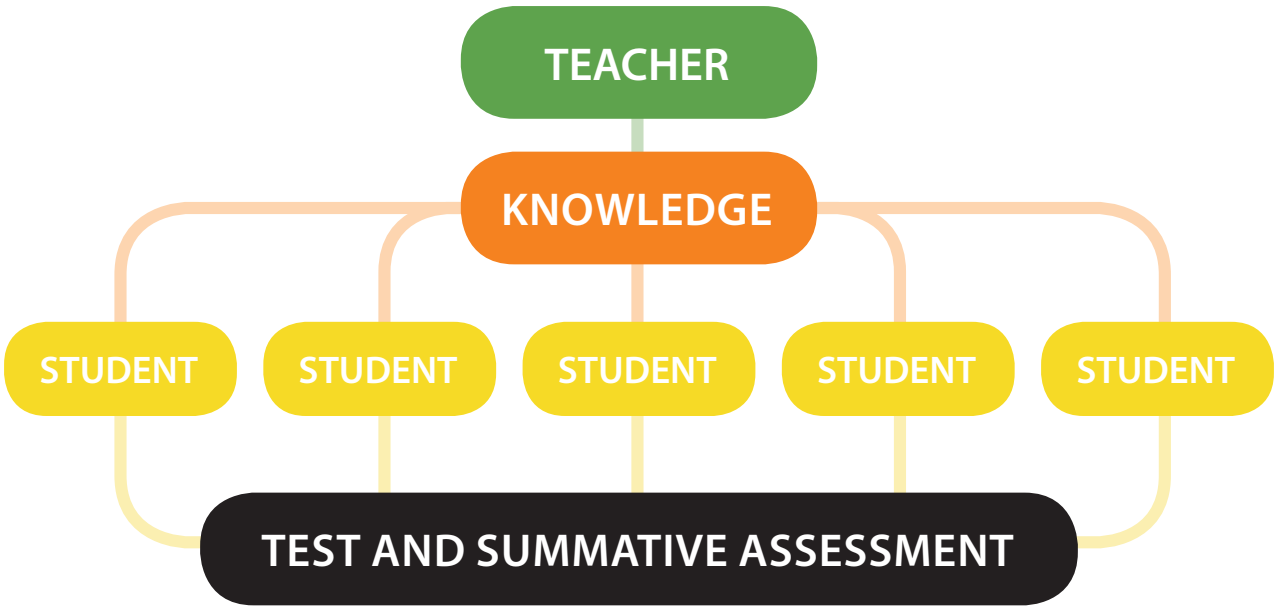
KEY CHANGES

The key change in the new curriculum is a move from a knowledge-based curriculum to a competence and skill-based curriculum. It is no longer sufficient to accumulate large amounts of knowledge. Young people need to develop the ability to apply their learning with confidence in a range of situations. They need to be able to use knowledge creatively. A level of competence is the ability to use knowledge rather than just to acquire it. This requires an active, learner-centred rather than passive, teacher-centred approach.

This approach to teaching and learning is in support of the Sustainable Development Goals (SDG's), otherwise known as the Global Goals. These are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. The key changes in the curriculum will ensure that Uganda is making good progress towards SDG 4 in particular which aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

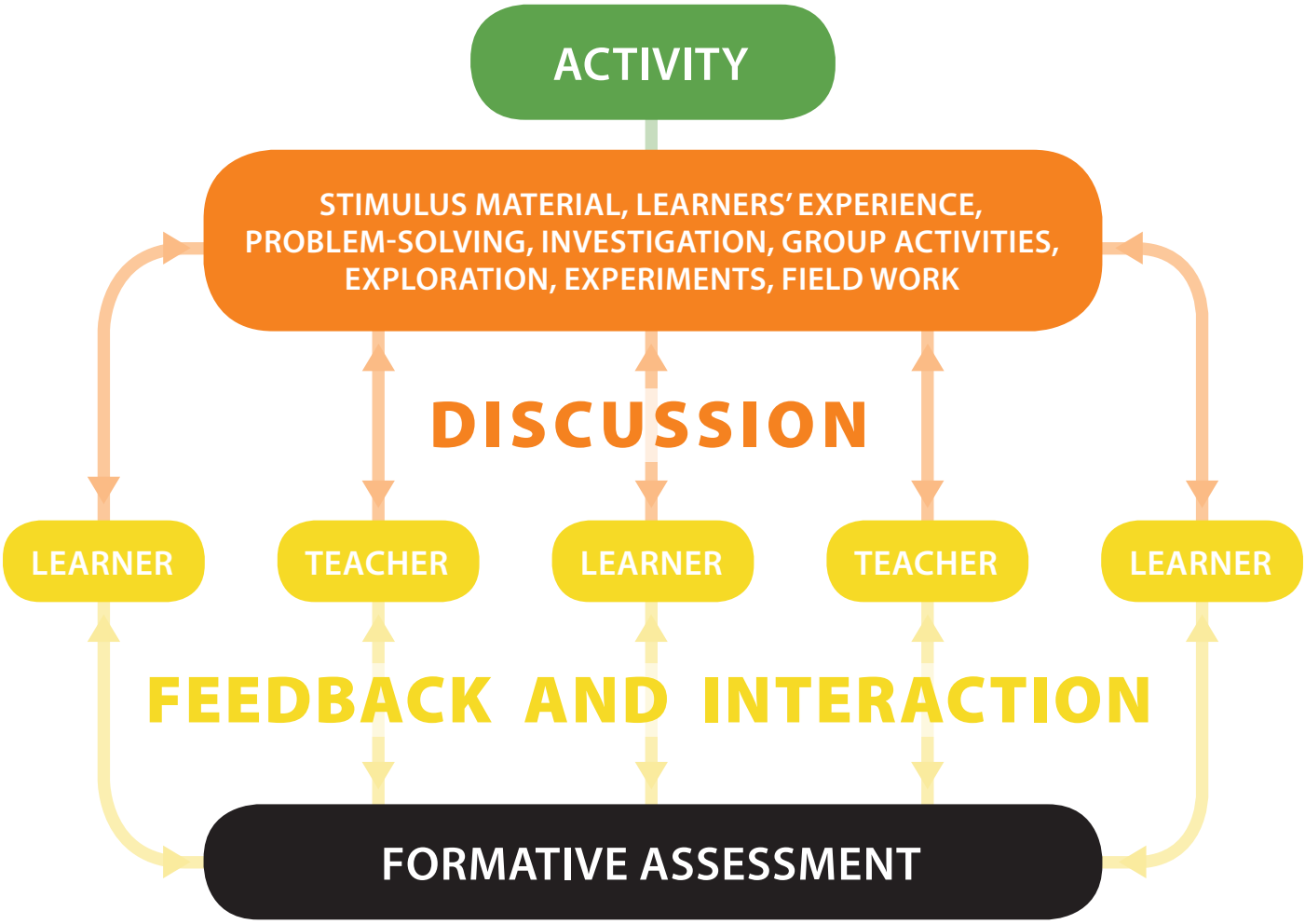
The change can be summarised in the following diagrams.

PREVIOUS KNOWLEDGE-BASED CURRICULUM



Knowledge-based teaching was based on transferring knowledge from the teacher to the students. The teacher had knowledge and transferred this knowledge to the students by lecturing, talking, asking them to read the text book or writing notes on the board for the students to copy and learn. Students acquired the knowledge, often without fully understanding it, and were tested at the end of a unit, term or school course to see if they had remembered it. The knowledge was based mainly on the knowledge in the subjects traditionally taught at University, and little attempt was made to make it relevant to young people's own lives. The whole education system was seen by many people as a preparation for University, but the vast majority of learners never reach university. The new curriculum will cater for this majority as well as those who later go on to University.

NEW COMPETENCE BASED CURRICULUM



In the new competence-based approach, the "student" becomes a "learner". The new Learning Outcomes can only be achieved through active engagement in the learning process rather than simply absorbing knowledge given by the teacher.

The teacher needs to build on the learners' own knowledge and experience and create Learning Activities through which learners can explore the meaning of what is being learned and understand how it is applied in practical situations.

Teaching and learning becomes a two way process of dialogue between the Teacher and Learners. Learners also learn from each other through discussion. Assessment also becomes a two way process of formative assessment; not just to give grades but to find out problems the learners may be having and help to solve them.

THE NEW CURRICULUM

The new curriculum focuses on four "Key Learning Outcomes" of: self – assured individuals; responsible and patriotic citizens; lifelong learners; positive contributors to society. The curriculum emphasises knowledge, application and behavioural change. It is based on a clear set of values which must be imparted to learners during the learning process.

At the heart of every subject there are generic skills that allow development into life-long learners. Besides, there are also cross cutting challenges that are embedded across subjects to enable learners understand the connections between the subjects and complexities of life.

Key Learning Outcomes

The new curriculum sets out 'Key Learning Outcomes' that sum up the expectations of the curriculum as a whole, and set out clearly the qualities that young people will develop.

By the end of the educational process, young people will become:

Self-assured individuals who:

- Demonstrate self- motivation, self-management and self-esteem
- Know their own preferences, strengths and limitations
- Adjust their behaviour and language appropriately to different social situations
- Relate well to a range of personality types

Responsible and patriotic citizens who:

- Cherish the values promoted in the curriculum
- Promote the development of indigenous cultures and languages and appreciate diversity, equity and inclusiveness
- Apply environmental and health awareness when making decisions for themselves and their community
- Are positive in their own identity as individuals and global citizens
- Are motivated to contribute to the wellbeing of themselves, their community and the nation

Lifelong learners who:

- Can plan, reflect and direct their own learning
- Actively seek lifelong learning opportunities for personal and professional development

Positive contributors to society who:

- Have acquired and can apply the Generic Skills
- Demonstrate knowledge and understanding of the emerging needs of society and the economy
- Understand how to design, make and critically evaluate products and processes to address needs
- Appreciate the physical, biological and technological world and make informed decisions about sustainable development and its impact on people and the environment.

Values

The new curriculum is based on a clear set of values. These values underpin the whole curriculum and the work of schools. They are also the values on which learners need to base their lives as citizens of Uganda.

- Peace and harmony
- Integrity and honesty
- Patriotism
- Positive attitude towards work
- Respect for human rights
- Self-Control

These values are not taught directly in lessons, nor will they be assessed, but they will inform and shape all teaching and learning.

Generic Skills

The generic skills lie at the heart of every Subject. They are the skills that enable the learner to access and deepen learning across the whole curriculum. They are the same skills that are sought by employers and which will unlock the world of work. They are the skills that allow young people to develop into lifelong learners who can adapt to change and cope with the challenges of life in the 21st Century.

Young people need to be able to think critically and solve problems, both at school and at work. They need to be creative and innovative in their approach to learning and life. They need to be able to communicate well in all forms, co-operate with others and also work independently. They need to be able to use functional mathematics and ICT effectively.

Critical thinking and problem-solving

- Plan and carry out investigations
- Sort and analyse information
- Identify problems and ways forward
- Predict outcomes and make reasoned decisions
- Evaluate different solutions

Creativity and innovation

- Use imaginations to explore possibilities
- Work with others to generate ideas
- Suggest and develop new solutions
- Try out innovative alternatives
- Look for patterns and make generalisations

Communication

- Listen attentively and with comprehension
- Talk confidently and explain things clearly
- Read accurately and fluently
- Write and present coherently
- Use a range of media to communicate idea

Co-operation and Learning

- Work effectively in diverse teams
- Interact effectively with others
- Take responsibility for own learning
- Work independently with persistence
- Manage goals and time

Calculation and ICT

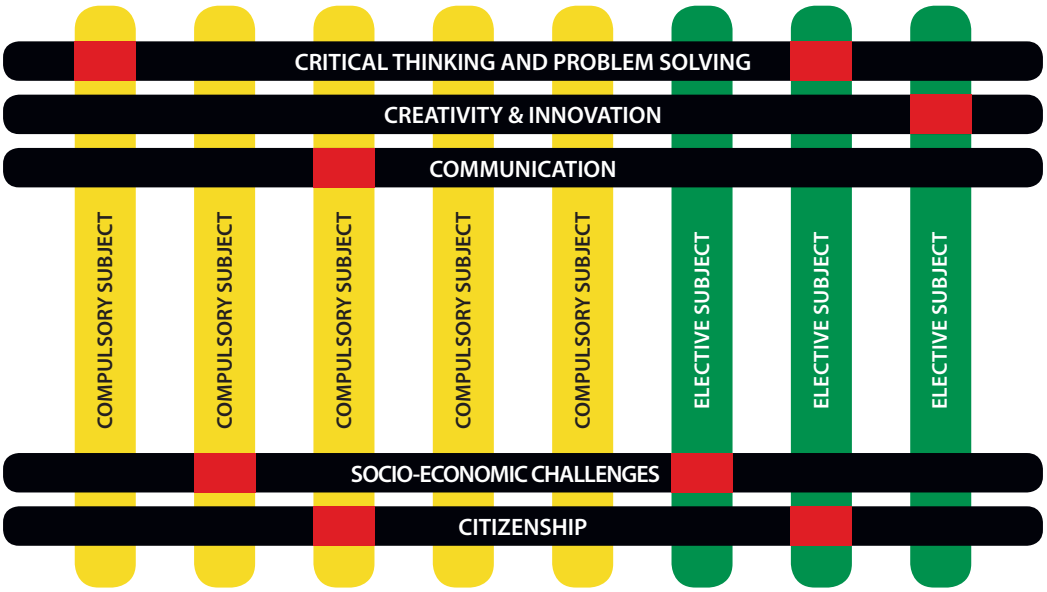
- Use numbers and measurements accurately
- Interpret and interrogate mathematical data
- Use mathematics to justify and support decisions
- Use technology to create, manipulate and process information
- Use technology to collaborate, communicate and refine their work

GENERIC SKILLS WITHIN GEOGRAPHY

These skills are not separate subjects in themselves; they are developed within the subjects of the curriculum. They also help learning within those subjects. It is when these generic skills are deployed that learning is most effective.

The generic skills are a key part of the new curriculum. They have been built into the syllabuses for each of the Subjects, and these Subjects provide the context for the skill development. Geography provides a rich context for learners to communicate, co-operate, and to think critically, calculate and solve problems

The Subjects also provide the contexts for progression within the skills. The same skill definitions apply to all year groups, and skills progression is provided by the increasing complexity of the subject matter within each Subject. For example, within 'critical thinking', learners begin thinking critically about the relatively simple subject matter in Senior 1 and then progress to thinking about the much more complex matters in Senior 4. Thus the progression is in the increasing complexity of the matters being thought about.



Cross-cutting Challenges

There are some issues that young people need to learn about, but which are not confined to one Subject. These are the 'Cross-cutting Challenges' and they need to be studied across the Subjects. These issues develop learners' understanding of the connections between the Subjects, and so of the complexities of life.

The Cross-cutting Challenges identified in the curriculum are:

- Environmental awareness
- Health awareness
- Diversity and inclusion
- Socio-economic challenges
- Citizenship

These have been built into the syllabuses of each Subject. The way in which they operate within the Subject is very similar to the generic skills. Geography provides a very good context for considering all of these issues.

GEOGRAPHY WITHIN THE NEW CURRICULUM

Geography is a compulsory subject from Senior 1 to 4.

Time allocation

GEOGRAPHY	SENIOR 1 & 2	SENIOR 3 & 4
	3 periods a week	3 periods a week

Rationale

Nearly all aspects of our lives are influenced by the environment, both natural and human, which we live in. In turn our lives have effects on the environment. Geography deals with this inter-relation between humans and their environment. This relationship is becoming increasingly important as the population of the world grows and the world's resources remain finite. Thus the key issues of Geography become increasingly important: population growth; soil conservation and erosion; the use and preservation of the oceans; the world's food supply and food shortages; rural-urban drift, urbanisation and the problems of urban areas; problems of pollution of all kinds; the conservation of wild life and many related issues.

At this lower secondary level Geography is seen as the study of human communities at local East African and wider African levels, with contrast through specific case studies of other areas of the world. At this level, therefore, the emphasis is on human and regional geography focusing on actual people in actual communities, rather than the more scientific study of spatial relationships which geography becomes at a higher level. It is felt this is more appropriate for the majority of learners at this level who will leave school without going on to higher education. At the same time it is important for those who do go on to higher education to develop sufficient geographical skills to enable them to specialise at a later stage.

Teaching and Learning: Geography

The thrust of the new syllabuses is experiential and towards deeper understanding and the development of skills. The focus in Geography is on the development of the ability to explore the world around them.

The new syllabuses provide learners with a wide range of contexts in which to develop this understanding, and these contexts are designed to engage the interest of the learner and to provide opportunities to build life-related knowledge, experience and skills. Teachers are encouraged to go beyond the textbooks and provide as many meaningful contexts as possible. The generic skills have been integrated throughout the curriculum and can only be acquired through active approaches.

The role of the teacher is to build on learners' existing knowledge and experience, but to extend that by posing problems to the learners. This makes them think about their own ideas and experiences as well as adding new knowledge and skills to it.

Learners need to interact with real situations inside and outside the classroom. They need to look at pictures or diagrams, examine statistics, or read texts from a range of sources. They need to find out knowledge and ideas for themselves. They should then be expected to express these in their own words, not those of the teacher, and so demonstrate that they have understood what they have learnt.

In this approach, learners are encouraged to:

- Be responsible for their own learning
- Think for themselves and form their own ideas and opinions
- Become critical thinkers, ready to face new challenges and situations for themselves

THE GEOGRAPHY SYLLABUS

Programme Planner

SENIOR 1	THEME	TOPIC	DURATION (NUMBER OF PERIODS)
Term 1	Introduction to Geography	1: Introduction	3
		2: Showing the local Area on a map	4
		3: Maps and their Uses	6
		4: Ways of studying Geography	6
		5: The Earth and its Movements	9
		6: Weather and Climate	8
Term 2	Introduction to East Africa	7: Location, Size, and Relief Regions of East Africa	3
		8: Formation of Major landforms and Drainage in East Africa	16
		9: Climate and Natural Vegetation of East Africa	8
		10: Climate change in East Africa and the world	10
Term 3	World Climates: Introduction to North America; Agriculture in East Africa and North America	11: Major Climatic zones of the World	8
		12: Geographical Regions of North America	6
		13: Development of Agriculture in East Africa	14
		14: Some Agricultural areas of North America	8
		Total	**108**

SENIOR 2	THEME	TOPIC	DURATION (NUMBER OF PERIODS)
Term 1	Mining and Manufacturing in East Africa and North America	15: Mining in East Africa	10
		16: Development of Manufacturing industries in East Africa	12
		17: Mining and Manufacturing industries in North America	14
Term 2	Fishing, Wildlife Conservation and Tourism in East Africa	18: Sustainable use of Fisheries resources in East Africa	10
		19: Wildlife Conservation and Tourism in East Africa	12
		20: Wildlife Conservation, Forests, Fishing And Tourism in North America	14
Term 3	Population, Urbanisation and Trade in East Africa and North America	21: Population and Urbanisation in East Africa	8
		21: Urbanisation in North America (New York)	12
		23: Transport and Communication in East Africa	8
		24: Trade within and outside East Africa	8
		Total	**108**

GENERIC SKILLS WITHIN GEOGRAPHY

SENIOR 3	THEME	TOPIC	DURATION (NUMBER OF PERIODS)
Term 1	Further use of Maps; Introduction to the rest of Africa	25: Further skills in Map Reading	12
		26: Location and size of Africa	2
		27: The Relief Regions and Drainage of Africa	8
		28: The Climate and Vegetation of Africa	14
Term 2	Introduction to the Rhine lands and China; Agriculture in Africa	29: Europe: The Rhine lands; Location, Relief Regions, Drainage and Climate	8
		30: Introduction to China: Location, Size, Relief Regions, Drainage, and Climate	8
		31: The Development of Agriculture in Africa	20
Term 3	Forestry and Irrigation in Africa; Farming in China and Rhine lands	32: Forests, Forest resources and Forestry in Africa	6
		33: Irrigation Farming in Africa	6
		34: Irrigation Farming in China	6
		35: Agriculture in the Rhine lands: Reclaimed land in Netherlands ; Cattle in Switzerland	12
		36: Tourism in Switzerland	6
		Total	**108**

SENIOR 4	THEME	TOPIC	DURATION (NUMBER OF PERIODS)
Term 1	Mining and Industrialisation in Africa; Rhine lands and China	37: Mineral Resources and Mining in Africa	9
		38: Industrial development in Africa	9
		39: Mining and Industrial Development in the Ruhr	9
		40: Mining and Industrial Development in China	9
Term 2	Population and urban development China, and Rotterdam	41: Population and Urbanisation in Africa	16
		42: Population and Urbanisation in China	12
		43: Urban areas in Netherlands: Rotterdam	8
Term 3	Transport, Communication and Trade in Africa	44: Development of Transport, Communication and Trade in Africa	10
		45: Trade between Europe especially the Rhine lands and Africa; and between China and Africa	8
		Total	**90**

The syllabus details for all subjects are set out in three columns:

LEARNING OUTCOMES The learner should be able to:	**SUGGESTED LEARNING ACTIVITIES**	**SAMPLE ASSESSMENT ACTIVITIES**
The knowledge, understanding or skills expected top be learned by the end of the topic	The sort of learning activities that include the generic skills and that will help learners achieve the Learning Outcomes.	Opportunities for assessment within the learning

Teachers should base their lesson plans on the Learning Outcomes using the Suggested Learning Activities as a guide. These are not the only possible learning activities, and teachers are encouraged to extend these and devise their own that are appropriate to the needs of their class.

DETAILED SYLLABUS FOR GEOGRAPHY

WHAT IS GEOGRAPHY? WAYS OF STUDYING GEOGRAPHY PHYSICAL ENVIRONMENT: TOPICS 1 – 6: 36 PERIODS

SENIOR 1: TERM 1 **Theme: Introduction to Geography**

TOPIC 1: INTRODUCTION — 3 PERIODS

Competency: After studying this topic, the learner should be able to understand and appreciate the importance of studying geography.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. use fieldwork to observe, name and classify human and physical features (s, gs)
b. know the meaning of geography and environment (k)
c. understand that the environment is all the things around us (u)
d. realise that geography is a study of the relationship between people and their environment, both natural and man-made (u)
e. appreciate that the study of geography helps us to understand how our lives are affected by the environment, and how we can preserve the environment so it remains useful to us (a, gs)
f. appreciate that caring for and preserving resources in the local environment, community and country are signs of love for one's country
	What is geography?
	• In groups, learners:
	  • Explore and identify 'natural' and 'built' features of the local environment by annotating photographs or labelling the environment through fieldwork sketches.
	  • discuss before agreeing the definition of these terms and making final adjustments
	  • investigate, name and categorise features on photographs in different environments.
	• As a whole class, learners contribute to a collaborative display of feature names, classifying them as 'natural' or 'built'.
	• Learners:
	  • use a range of media: case studies, books, visitor- talks and Internet research, as well as their own work, to debate and agree what geography means.
	  • discuss the importance of studying geography, using examples from things they do every day, such as collecting water and deciding on when to plant or harvest certain crops.
	  • discuss, identify and list ways that they and their family use the local environment; they identify how other people and animals use places in different ways. They debate the question 'Whose environment is it?' and jointly compile a action plan or charter for environmental care for their local area.
		• Observe learners as they discuss and amend their work; ask learners to explain their categorisation of natural and built features.
		• In conversation, ask learners to explain how people in the school are affected by the physical environment; and give an example of how people have changed the physical environment.
		• Assess the learners' manifesto.

SENIOR 1: TERM 1

Theme: Introduction to Geography

TOPIC 2: SHOWING THE LOCAL AREA ON A MAP

4 PERIODS

Competency: After studying this topic, the learner should know the main physical and human features of the local area and how these can be shown on a map.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know what a map is and how this can be used to show places. (k) b. understand the difference between a map and a photograph (u, s) c. understand that maps are representations of the world at different scales (u) d. be able to draw a sketch map of the school and/or the local area (s) e. be able to use and interpret symbols and identify features on a map using a key (s) f. be able to identify directions on a map using basic compass points (s) g. be able to follow routes on a map (s) h. be able to use the local area maps drawn in (c) above to find information about people living in the local area (s)	**What is a map?** • Learners use globes, a range of maps (including digital maps) and aerial images to investigate what a map is and what it might show. • Learners draw a map to show a visitor to the area how to get to the school (do not tell them how to draw it). They compare and evaluate each other's maps and identify ways to improve them. • Through fieldwork, learners use maps and compasses to orient themselves and sketch what they can see in that direction, annotating features. • In pairs, learners draw a map to show the route from their school to home, indicating physical and human features using a key, and then swap maps so they can find out where the other person lives. • Learners use their own and other maps to help them ask and answer questions about their local area.	Observe learners explaining what a map is and examine their written definitions. • Learners use their own maps to explain what the local area is like. • Learners discuss the qualities of a good map and evaluate each other's. Observe what they produce to describe their findings. • In conversation, evaluate how well learners answer questions using given maps about the relationship between maps and photographs.

SENIOR 1: TERM 1

Theme: Introduction to Geography

TOPIC 3: MAPS AND THEIR USES

6 PERIODS

Competency: After studying this topic, the learner should know the main features of a map and understand the differences between a map and reality.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. draw a sketch map of the school and/or the local area b. use and interpret symbols and identify features on a map using a key (s) c. identify directions on a map, using basic compass points (s) d. follow routes on a map (s) e. draw a map using a simple scale and use scale on a map (s) f. use letter and number co-ordinates or bearings and directions to locate places on a map (s) g. locate places on an atlas map using latitude and longitude and describe the places from information on the map (s) understand the difference between a map and a photograph (u, s) h. understand that there are many types of maps on different scales (u) i. use a linear scale and representative fraction to estinate distance, area and size of features on a map(s)	**Types of scale** • Show a photograph of a person and ask learners to compare this with the real size of the person or, if they have a mobile phone, take a 'selfie' and ask them if it is their real size. • Ask: if a photograph reduces the real size of a person by a certain amount, does it reduce all parts by the same amount? • Explain that a scale does the same thing on a map. • Explain: All things on a photograph or map reduce items or objects by the same amount so, to get the real size, you multiply e.g. 1 cm. on photograph = 10 cms. in real size. This is called a representative fraction i.e. 1:10 • Learners are challenged to produce a sketch map of an area showing comparative size, shape and distance. They calculate representative fractions to help them do this. • Learners use paper and digital maps at different scales to measure and compare distances between features of their locality e.g. their home and school, nearest town, river etc. • Learners measure areas, distance and length of features on maps to ask and answer questions about a locale e.g. about patterns of land use. They investigate types of symbols used on a map and devise some of their own. • Learners play games using grid references to find hidden objects out of doors or use these as clues to guess the feature on a map. • Learners use globe-tossing activities to find places, using latitude and longitude clues and then they write their own clues. • Learners develop these skills in meaningful contexts and fieldwork to investigate where places are and what they are like.	• Observe learners as they discuss and problem-solve how to make a scaled map. • Observe how well learners explain what their maps show, using language of scale. • Learners use survey maps, as well as their own maps, to ask and answer questions about places at different scales. In conversation, ask learners to explain their views. Observe how well learners explain what their maps show about patterns and type of land use, with reference to size, scale and the key.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Directions and compass • Ask learners: On the same map, how do you know which direction to go? • Explain that maps show real directions. • Swap maps and in pairs ask learners to explain directions between places. • Revise compass from primary school. • Show map with compass directions. • Ask for directions between places. • Explain, and learners draw, main points of compass • Explain compass bearings based on degrees of circle. • Give activity based on compass bearings. **Grids** • Show map with grid and explain grid: eastings, northings, four and six-figure grid references. • Activity to locate places using a grid. **Types of maps** • Ask what places they have seen drawn on maps. • Explain that we can draw any area on a map from the school or district to Uganda, Africa or the world. • Show examples of different types of maps: wall maps, atlases, globes. (Physical, political, topographic, road/street, climate, tmematic.)	

SENIOR 1: TERM 1

Theme: Introduction to Geography

TOPIC 4: WAYS OF STUDYING GEOGRAPHY: FIELD WORK, PHOTOGRAPHS, STATISTICS, CHARTS AND GRAPHS

6 PERIODS
plus time outside the classroom

Competency: After studying this topic, the learner should understand and be able to study geography through the use of field work and through studying photographs.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know what is meant by field work (k) b. understand how to use and apply different techniques used in field work (u) c. use observation, interviews, questionnaires, drawings and photographs in field work (s) d. use maps, aerial images, photographs, graphs and charts to communicate data (s) e. analyse and present statistics gathered in fieldwork (s); f. write conclusions to summarise field work (gs) g. know the three different angles from which photographs can be taken (k) h. know the terms used to describe the different parts of a photograph (k) i. appreciate the effect of perspective on oblique photographs (v, a) j. differentiate between photographs and maps (u) k. describe an area seen on a photograph (s) l. make a sketch of an area from a photograph (s) m. appreciate that field work and photographs are important because geography is the study of the real world (v, a, gs) n. use field work to study a trading centre, town or other urban area or any other area (s, u)	**Ways of studying Geography** • Discuss ways of finding about people and places. Learners should consider these ways of studying geography and begin to evaluate their effectiveness: using media; reading research; interpreting maps; analysing data and charts etc; interpreting reports; field study. **Techniques to use in doing field work** Learners should do the following: **Writing up field work** Challenge learners, individually or in groups to suggest their own topic, objectives and methods to collect information about the local area. They should conduct a field study, compare findings and share opinions about different methods of data collection. (Interviews, questionnaires, measurement, sketches, data analysis.)	• Observe learners planning their enquiry, the results achieved and their evaluation of the process. • Observe how learners present findings; they should explain how they have carried out an enquiry through fieldwork and what aspects were particularly useful.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	The use of photographs • Show photographs taken from the ground, a high angle and the air. Ask what the differences are. Explain that photographs can be taken from different angles: from the ground, from the air but looking at an angle (oblique aerial), from the air looking vertically down (vertical aerial) • Ask learners to describe the differences i.e. ground and oblique show perspective: things closer appear bigger and those further away smaller; vertical air (aerial): things appear their correct shape but can only be seen as a shape from above, as on a map • Explain that for oblique and ground you use the term foreground, middle ground and background and left and right to describe where things are. For aerial you use top and bottom or left and right. (Note north is not necessarily at the top in photographs, so do not use north etc.) • Explain that it is useful to draw a sketch to show the area on a photograph. Learners practise this: Draw a frame the same size as the photo. Divide it into 3 or 4 areas which are similar e.g. forest, houses, banana crop, road, lake etc. and shade or colour and label these. Use these to describe the area shown in the photograph. • *Explain that many photographs of areas they will study are available on the Internet. Give learners a topic or area to find relevant photographs on the Internet*	

SENIOR 1: TERM 1 — Theme: Introduction to Geography

TOPIC 5: THE EARTH AND IT'S MOVEMENTS — 9 PERIODS

Competency: After studying this topic, the learner should understand the relationship between the Earth and the sun and the effects this has on our lives.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. understand the relationship between the Earth and the sun and how this affects temperatures and seasons (u)
b. draw diagrams to show the relationship between the Earth and the sun's rays and the causes of temperature variations and use these to show why the Earth can be divided into tropical, temperate and polar regions (s)
c. understand how the rotation causes day and night (u)
d. know how we can locate places on a globe by using a grid including the use of latitude and longitude. (u)
e. use and measure latitude and longitude (s)
f. calculate time using longitude (s)
g. appreciate how the movement of the Earth in relation to the Sun affects the way people live: the effect of temperatures and seasons, lengths of day and night (a, gs)
	• Learners are given a set of 'True' and 'False' statements about the rotation of the Earth and its orbit around the sun and carry out research in groups to identify the correct answers. They use their chosen facts to illustrate a demonstration of the Earth in motion over a twenty-for hour and yearly cycle, using models and spoken explanation.
	• Learners work in groups to:
	  • investigate, using a globe or football and light source, how the energy from the sun reaches different parts of the Earth when it is tilted on its axis and in orbit around the sun
	  • explain this verbally and use relevant vocabulary.
	• Individually, learners draw their own diagrams and label them, writing a short explanation of how temperature variation occurs over the Earth throughout the year and how this causes different climatic zones.
	• In groups, learners write a set of questions for another group about the Earth's relationship to the sun and then take it in turns to ask each other.
	• Learners play globe-tossing games using a blow -up globe and respond to questions about latitude and longitude with increasing difficulty, developing their own questions to ask each other.
	• Learners investigate webcams in different cities, East and West of where they are, to compare time zones and describe what is happening there; they use a map of world time zones to help them do this.
		• Observe learners as they demonstrate their models and give a spoken explanation of the processes at work.
		• Observe learners' models and drawn diagrams, and their spoken and written explanations with appropriate vocabulary.
		• In conversation, ask learners to explain how longitude and latitude are used to locate places on Earth.
		• Learners explain how longitude is used to calculate time and produce written calculations of time difference.
		• Learners identify a place in another climate zone, explain how daily life might differ and explain why.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Rotation of the Earth • Explain that the Earth moves, not the sun – proved by scientists like Copernicus • Using a globe or football, spin it round to show the axis. The Earth spins on an axis. • Ask learners: In which direction are we moving in relation to the sun: at sunset, at sunrise? • Ask where we are in relation to the sun: in daytime; at night? • Demonstrate this with a globe or football and light source. **Revolution of the Earth** • Explain that the Earth revolves or moves round the sun once a year • Demonstrate this with a globe or ball moved round the classroom with a source of light in the middle. • Demonstrate and draw diagrams to show the meaning of the axis being tilted. • Demonstrate through questions that poles do not move and equator moves round fastest. • Move tilted globe or ball, with poles marked, round the 'sun'. Ask which parts of the Earth are tilted towards or away from the sun at different times? (April – August – north tilted towards, south away; October – February – south tilted towards, north away. March and September: sun overhead at equator) • Ask: When will it be hotter or colder: when we are tilted away or towards the sun? • Explain and demonstrate that this causes seasons: Hot or summer when tilted towards sun, and cold or winter when titled away from sun. • Explain spring: moving from winter to summer; and autumn (American: fall): moving from summer to winter. • Ask why places near equator do not have hot and cold seasons. • Move globe or ball to position when north is tilted towards the sun: for how long will a place near the North Pole be in the sun; for how long will a place near the South Pole be in the sun? • Explain the different lengths of day and night in summer and winter. • *Learners research on the Internet for any sets of diagrams or pictures which explain the seasons. sets of diagrams or pictures which explain the seasons.*	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Latitude and longitude • Ask how we use lines on a map to find places. Use grid. • Explain that we can draw lines on a globe like a grid on a map, but they are circles. • Demonstrate with globe and diagrams: lines going round the world through north and south poles are longitude; lines going round at right angles to these are largest half way from the poles (the equator) and get smaller towards the poles. • Draw diagram to show how these are measured by angles. • Give examples of longitude and latitude of places in Uganda. • Use atlas maps to practise latitude and longitude. • Explain through demonstration and questioning special lines using globe and light source as above: • Sun's rays come from directly overhead near equator. Tropics of Cancer (north) and Capricorn (south) are the farthest away from the equator where the sun is overhead only one day a year. • When Earth is tilted away from sun in winter, places near the poles will not see the sun. When Earth is tilted towards the sun in summer, places near the poles will receive sun for 24 hours. The Arctic (north) and Antarctic (south) circles show areas where this happens at least one day per year.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	5.5 Time: • Ask and demonstrate: if Earth rotates round once in 24 hours: how many degrees does it go through: in 24 hours? In 1 hour? The Earth moves round on its axis completely i.e. 3600 in 24 hours, so 150 in 1 hour. • Ask how many degrees of longitude it moves through in 1 hour. • Explain with diagrams: We measure time using this: in 1 hour we move 150 of longitude. So if it is 12 noon now what will the time be when we have moved 15 0? • Explain that time is measured from a line of longitude which passes through Greenwich in London. When it is noon in Greenwich we count how many degrees we are east or west of Greenwich e.g. Uganda is about 45 0 east of Greenwich. So how many hours does the sun reach us before Greenwich? This means the sun reaches us each day 3 hours earlier than it reaches Greenwich. When it is 6am here it is only 3am in Greenwich; when it is 12 noon here it is only 9am in Greenwich. So we can find the time in any place by knowing our own time and adding 1 hour for every 15 0 if the place is east of us and subtracting 1 hour for every 15 0 if the place is west of us. • Learners do some exercises to find time in different places. • *Look on the Internet to find maps of world time zones.*	

SENIOR 1: TERM 1 — Theme: Introduction to Geography

TOPIC 6: WEATHER AND CLIMATE — 8 PERIODS

Competency: After studying this topic, the learner should know and understand the main elements of the weather, their causes and how to measure them.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. understand the differences between weather and climate (u) b. understand the elements of weather and how they are measured (u) c. carry out a project to observe, measure and record the elements of weather, make suitable instruments and visit a weather station(s) d. know the names of the main instruments used for recording the different elements of the weather and how each one is used (k) e. know what a Stevenson screen looks like, how it is built and why it is used (k) f. know the terms used for plotting weather on maps (k) g. know the names and characteristics of the main kinds of clouds and rainfall. (k) h. appreciate that people's lifestyles are influenced by the type of weather and climate (a) i. understand the positive and negative effects of the weather on their own lives and those of their communities (u) j. be able to draw climate graphs of local and other areas and describe climates using these (s)	**Weather and climate** • Learners describe the weather that day • Primary revision: Learners list all the elements used to describe the weather, including sunshine, wind, clouds, rainfall, temperature, humidity, pressure. • These describe the weather. Ask "What is the difference between weather and climate?" Weather describes a particular moment or day. Climate describes what the weather is usually like. **Measurement of weather** • Ask learners to name any instruments they know for recording the weather. • List these on BB and add any not included. • Explain that places where all elements of the weather are measured are called Weather Stations. • Learners visit a working weather station to research the components of a weather station and how they work. They name, describe and practise using the tools and approaches they have seen and make their own equipment, where practical, such as Okta grids for measuring cloud cover and rain gauges. • Show diagrams, or ask learners to investigate, any weather instruments not seen at the weather station. They should explain their use. • Learners work in groups, using their collected weather data to create charts and graphs that help to explain daily variations. Groups make a presentation about weather and climate, and everyday life, in their own or a contrasting locality. • *Learners should ensure they understand the following key terms: thermometer; rain gauge; measuring cylinder; sunshine recorder; wind vane; anemometer; barometer; humidity; hygrometer; relative and absolute humidity; Stevenson screen.*	Observe learners as they discuss and explain their weather data and how it influences everyday activity. Observe learners' use of appropriate terminology as they record data using instruments and report back. • Observe group dialogue as they prepare their presentation and their explanation of the work produced.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Recording weather • In groups, learners make any simple weather instruments they can e.g. rain gauge (straight sided tin), wind vane • Group learners and guide them to start a weather diary to record daily weather, either by instruments, if available, or by observation e.g. dry, wet, very wet; sunny, cloudy; hot, warm, cold; wind strong, mild, calm; wind direction (from); thunder/ lightening etc. • Learners use simple statistics to record the weather. **Recording weather on maps and graphs** • Explain and show examples of recording weather on maps by lines, symbols or shading e.g. temperature (isotherms), rainfall (isohyets), pressure (isobars): "lines of equal……." Elicit ending. • Show examples of maps and give questions based on these. • Explain and practise how to record weather on graphs: line graphs for temperature; bar graphs for rainfall. • Give set of figures for learners to draw graphs. • Learners keep written/digital weather diaries and a diary of day-to-day activities, presenting these together with an explanation of how weather can influence day-to-day human activity. • Learners work in groups to research and explain how the local climate influences their lives, contrasting this with lifestyles in a different climate zone. They give examples of how extreme weather events and the effects of climate change affect people's lives here and elsewhere in the world.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Clouds and rainfall • Revision: What causes rain? (air rises and cools, and cool air can contain less water vapour so some turns into drops of water). • Show pictures of cloud types and/or show them as they appear in reality: depends on height, shape and thickness: • cirrus (very high, thin) • stratus: (lower, thick and flat) • cumulus: (low, thick and tall often growing upwards) • cumulo-nimbus (low, thick, tall and causing rain) • Learners look for pictures of cloud types on the Internet. • Types of rain: explain that all rain is caused by air rising. Type depends on what causes air to rise: • relief rain: air rises due to passing over high hills • convectional: air rises because it gets hot in daytime • frontal: Two types of air/wind meet and hotter air moves up over cooler air • Ask where and when in local area each type is common.	

INTRODUCTION TO EAST AFRICA
TOPICS 7 – 10: 36 PERIODS

SENIOR 1: TERM 2

Theme: Introduction to East Africa

TOPIC 7: LOCATION, SIZE, AND RELIEF REGIONS OF EAST AFRICA — 3 PERIODS

Competency: After studying this topic, the learner should be able to know the countries making up East Africa; their comparative sizes in area and population; and the main relief regions they can be divided into.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. use maps, statistics, graphs and diagrams to analyse population (s) b. appreciate that East African countries vary greatly in area and population (a, gs) c. know the East African countries, their approximate population and area (k) d. use contours to show physical features on maps and draw cross-sections from simple contour maps (s)	**The countries** • Learners answer questions about the countries making up East Africa to determine what they know about their comparative size and population. They then work in groups to research and create their own table of information regarding this, comparing results and explaining their use of sources. • Explain that answers may differ as there are two definitions; countries linked into a geographical region and countries which have joined the political Community of East Africa. This expands as more countries join. Ask which countries are in each. • Explain that in this syllabus we are using the traditional idea of East Africa as Uganda, Kenya and Tanzania. **Physical or relief regions** • Use wall map, sketch map on BB or atlas relief map of East Africa to ask learners questions e.g. position and names of highland areas, plateaus, coastal plains etc. • Name main relief regions on sketch map • Learners study one or more local features through fieldwork, collecting samples, taking photographs and creating a labelled map display to show the physical environment and the influence of relief on weather and climate. Learners add the location of some past and present physical hazards and link to a short piece of text explaining what happened/might happen and how severe the threat is. • Learners work in groups to draw a map showing relief regions and collaborate to identify and explain regions where there is or has been a high hazard risk.	• Observe learners as they collect information and create their graphs and diagrams: ask them to describe what their maps show and how accurate they believe the information to be. • Observe learners as they describe and locate key landscape features through fieldwork and research on their map and add correctly labelled images. • Observe learners' explanations of their map and judgement of hazardous areas. Models and diagrams produced by learners will reveal their level of understanding as they explain the steps involved in the process.

SENIOR 1: TERM 2

Theme: Introduction to East Africa

TOPIC 8: FORMATION OF MAJOR LANDFORMS AND DRAINAGE IN EAST AFRICA

16 PERIODS

Competency: After studying this topic, the learner should be able to explain how each of the main types of landforms in East Africa was formed, the main types of rocks and the main features of the drainage.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. know the main types of landforms and drainage features of East Africa(k)
b. understand how igneous, sedimentary and metamorphic rocks are formed, that they are made up of minerals, and that some minerals are useful (u)
c. understand the process of weathering and how weathered rock particles form the basis of soil (u)
d. understand how each of the main types of landform was formed: by rocks themselves or by the rocks being worn away or eroded away (u)
e. understand the characteristics of the main types of rocks and their effect on soils.(u)
f. understand the relationship between drainage the landforms. (u)
g. recognize the landforms on photographs. (s)
h. locate the examples of landforms on maps of East Africa. (s)
i. appreciate that the landforms, rocks and drainage all affect the way people live. (v/a, gs)
j. understand the main concepts of plate tectonics and how this has led to the formation of the main physical features of East Africa (u)
k. understand the characteristics of important kinds of physical features in East Africa, including mountain ranges, volcanoes, plateaus, basins and rift valleys (u)
l. study through field work any of the above physical features in the local area (s)
m. draw a map to show the main relief regions of East Africa (s)
n. recognise physical features from photographs (s)
	• In groups, learners:
	  • produce a commentary about the formation of a particular type of landscape and its geology
	  • write a case study on a type of landscape feature such as a river, volcano or lake and how it affects human and physical landscape
	  • debate the merits of living near or on a particular feature, explaining the pros and cons.
	Types of rock
	• If possible, show three types of rock
	• Explain that there are three types of rock:
	  - Metamorphic the original rocks of the Earth e.g. granite, quartzite, schist.
	  - Volcanic /igneous rocks formed from lava coming from volcanoes and solidifying e.g. basalt, pumice
	  - Sedimentary rocks formed when other rocks are eroded away and then deposited, or when rocks are formed from dead plants or animals e.g. marble, sandstone, limestone, coral
	• Ask learners which areas of East Africa each type of rock is likely to be found. Which are: a. the hardest rocks; b. the softest rocks? (Link with work in science)
	Formation of landforms
	• Ask learners: are the largest areas of East Africa mountains, plains or plateaus?
	• Explain that most areas are plateaus i.e. high but flat areas. The plateaus are interrupted by a. mountains; b. rift valleys; c. plains on the coast, each formed in different ways
		• Observe how well learners make links when explaining a landscape between the appearance, geology and the process involved.
		• Observe how effectively learners express their views about living near a particular type of feature e.g. a volcano? Note how well they explain why volcanic areas or former volcanoes often have a high density of population.
		Observe how well learners use correct terminology and locate features accurately on maps.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
o. understand how their own lives and the lives of their communities are affected by physical features, including natural hazards (u) p. understand through case studies how the physical features affect the lives of people in selected areas of East Africa (u) q. draw diagrams to show the formation of important physical features (s)	**Structural features** **Faulting** • Ask: where do most earthquakes occur in East Africa? • Show diagrams of faulting. Ask, if there is a fault or crack, what might happen to the land along the fault? • Explain with diagrams: earthquakes; faults; rift valleys; block mountains. • Show map of East Africa and ask where the rift valleys and block mountains are: east and west rift valleys and block mountain (eg: Rwenzoris) • Learners look for diagrams of faulting on Internet. **Vulcanicity** • Ask what happens when a volcano occurs and where these occur in East Africa. • Use diagrams and questions to explain volcanoes, including volcanic mountains, plugs, craters, calderas, with examples from East Africa. • Ask learners to list the advantages and problems of living in a volcanic area • Learners look for diagrams and pictures of volcanoes in east Africa on Internet. **Warping** • Explain that most of East Africa is a plateau. Ask if they live on a plateau. What is a plateau? – high and fairly flat although cut into by rivers. • With diagram, show how the plateau can be warped or sink down slightly in places. • Learners suggest where this has happened most (L. Victoria) **Drainage** • Ask learners what lakes are. In what type of landforms are lakes likely to form? (rift valleys and warping e.g. Lake Victoria) • Ask learners what a river is and how rivers form. Where in East Africa are rivers likely to start? (highlands and lakes) • Show a wall map or BB map showing main lakes and rivers of East Africa. • Learners copy this.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

	Erosional features
	• Ask learners what happens to the soil when it rains heavily.
	• Explain that each of these types of landscape can be eroded or washed away.
	• Ask learners what different forces can erode or wash away the land and rocks.
	• Explain through questioning, erosional forces: rain, the sea or lake, ice on high mountains (glaciers)
	• Learners look up erosion on Internet
	Erosion by water
	• Observe any steep slope outside the classroom. Ask: What happens to the soil when it rains? Observe a gentle area. What happens to some of the soil which is washed away?
	• If possible, visit a river or stream and observe it, or ask those who have seen rivers: how can the river wash away the land? What happens to some of the soil washed away? Observe deposition.
	• Use diagrams and photos to explain main features of river valleys or visit one if possible: v-shaped valleys, waterfalls, rapids, gorges, meanders, flood plains, alluvial fans, deltas etc.
	• Learners look up each of these features on the internet and find photographs.
	Erosion by lake or sea
	• If possible, visit a lake, observe and ask:
	  • how does the water move?
	  • what causes it to move?
	  • what effects does this have where the waves break?
	  • where does the material on the shore come from?
	• Use diagrams and photos to explain coastal erosion, cliffs, caves, arches etc.
	• Use diagrams and questions to explain coastal deposition: beaches, dunes, spits and bars etc.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Erosion by ice • Use photographs to show ice on mountains e.g. Rwenzoris, Mt. Kenya. Ask what will happen to the rocks and soil when ice moves. Where will it deposit material? • Use diagrams and photos to explain glaciations – erosion and deposition. **Coral reefs** • Explain that a tiny creature called a coral polyp lives in some areas of sea near the shore. When they die their skeletons build solid white rock called coral. Fish like to live in coral, so coral reefs have many fish. These are found off the shore in many parts of the East African coast.	

SENIOR 1: TERM 2 — Theme: Introduction to East Africa

TOPIC 9: CLIMATE AND NATURAL VEGETATION OF EAST AFRICA — 8 PERIODS

Competency: After studying this topic, the learner should be able to describe and explain the main types of climate in East Africa and how the climate influences the vegetation, appreciating this as a natural resource which can be used to benefit the present and future generations.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. understand the characteristics of the climates of Uganda and the rest of East Africa and the factors influencing them (u)
b. understand through fieldwork the characteristics of the vegetation and how vegetation is affected by the climates (u)
c. draw graphs to show the different climates (s)
d. draw a map showing the climates and vegetation of East Africa (s)
e. recognise and describe a climate from a graph (s)
f. recognise and describe types of vegetation from photographs. (s)
g. understand through case studies how selected climates and types of vegetation affect the way of life of the people in those areas (u)
	• Learners recap knowledge to identify the key factors influencing climate in East Africa.
	• In pairs, learners:
	  • select sources to answer given questions and use research to accurately complete a climate zone map of the region.
	  • add a key to show vegetation.
	  • evaluate another pair's map and edit their work accordingly.
	  • write their own questions and challenge other pairs to answer them, using their maps.
	Factors affecting the climates of East Africa
	Temperature and rainfall
	• Revise topic 6 by questioning: why do most places in East Africa have a hot climate? Which places are cooler and why?
	• Revise by questioning the type of rainfall caused when air gets hot and rises.
	• Explain that, because most places are hot, the most important type of rainfall in East Africa is convectional.
	• Revise topic 4: Ask when is northern hemisphere tilted towards sun and when southern hemisphere? What months will it be hottest in East Africa north of equator; and what months hottest in south?
	• Explain that most rain occurs at the hottest time.
	• Ask questions and explain other factors affecting temperature: height. Other factors affecting rainfall: distance from sea or lake.
	Types of climate
	• Show climate graph for each type of climate, un-named. Learners: describe climate from graph; answer questions and describe type of climate. (Use two savannah graphs for north and south.)
		• Learners write their own questions and produce their paired maps. Observe these questions and maps and evaluate how well learners have been able to understand characteristics of vegetation and climate.
		• Learners take turns in each pair to answer questions from other members of the class; they explain how people in different climate zones might live and why. Observe these conversations and assess how well lines of questioning build on what has been learnt.
		• Observe responses of learners to this question about why people's everyday life is less affected by climate than in the past.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

	• Show all climatic regions on wall or BB map.
	• Explain by questioning from climate graphs:
	• Equatorial: two wet seasons; two less wet seasons. Hot all year. Two wet seasons when sun overhead on equator: March-May and September – November. Wet all year because always hot.
	• Savannah: One wet season; one dry season. Wet when sun high in sky; dry when sun lower. Hot when sun high; cooler when sun lower. Wet and dry seasons the opposite for places north and south of equator
	• Semi-arid: short wet season; long dry season. Similar to Savannah but in places further from sea or lake
	• Mountain climates: may be similar to Equatorial or Savannah but colder due to height. Wet due to relief rain
	• Coastal: Similar to Equatorial or Savannah but very hot due to being near sea level
	• Learners draw sketch map to show climatic regions of East Africa.
	Vegetation
	• Show photographs of each type of vegetation. Learners describe vegetation and suggest, with reasons, what type of climate it comes from.
	  • *equatorial*: thick forests and other characteristics
	  • *savannah*: grassland and scattered trees
	  • *semi-arid*: short grassland and very scattered trees or shrubs
	  • *mountain climates*: short grass and small shrubs due to cold climate
	  • *coastal*: similar to equatorial
	• *Learners look for and describe photographs of each type of vegetation on the Internet*
	How people live
	• Explain that, traditionally, the way people lived depended mainly on the climate. For each of the photographs used in the previous exercise, learners suggest how the climate affects the way people in that type of area live; what type of farming they do etc.
	• Ask why many people's way of life is less affected by the climate these days.	

SENIOR 1: TERM 2 — Theme: Introduction to East Africa

TOPIC 10: CLIMATE CHANGE IN EAST AFRICA AND THE WORLD — 10 PERIODS

Competency: After studying this topic, the learner should understand what is meant by climate change, what is causing it and its effects in East Africa.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. understand the concept of climate change and its indicators and be able to draw diagrams to show the causes of climate change (s) b. understand the possible causes of climate change (u) c. understand the political and other difficulties faced in addressing climate change and carrying out measures to reduce its effects (u) d. understand how climate change may affect Uganda and the rest of East Africa (u) e. understand possible ways in which local communities and government can reduce the effects of climate change (u) f. use two case studies to examine the possible effects of climate change in other areas of Africa and the world (u) g. form opinions about measures to reduce or mitigate climate change (a) h. participate in tree planting and other activities which might alleviate the effects of climate change in their own communities/school (s) i. appreciate the need for people and governments to take actions to help reduce climate change, and change their lives to mitigate or reduce the effects of climate change (a, gs)	• Learners research the meaning of climate change using different sources and think critically about the definitions before reporting back with an explanation of their chosen one. • Ask groups if they can explain the difference between climate change, which has happened over millennia and the rapid climate change that is currently happening and attributable to human activity. • Students investigate how some degree of global warming makes this planet habitable – at just the right temperature for us and other life to flourish. Enhanced global warming is when additional 'greenhouse gases' (as a result of human activity) are released into the atmosphere, trapping more heat and thus raising the global temperature. Students learn about the basics of this process and then think of the best questions to investigate this further. They research and question sources and create their own diagrams to show the global warming process and the enhanced global warming process. • Learners work in groups, taking on the roles of government ministers with different views about the relative importance of people, the economy and the environment. Some learners prepare a case for building more roads and cars and burning more fossil fuels, others in the group want a greener economy. Others act as advisors offering some solutions to the effects of climate change. The groups use newspaper headlines from the region to help them.	• Learners should explain the distinction between climate change and human-induced climate change, i.e. that one is a natural process that has been taking place over millennia and one is a very rapid change attributable to human activity. • Learners draw a diagram to show what causes climate change and explain this in their own words, using appropriate vocabulary. In conversation, ask learners to explain the difference between weather and climate. (whilst the climate is generally becoming hotter, variations around the globe mean that some places might be having more extreme weather e.g. colder days. But this isn't an argument against climate change as weather and climate work at different scales.) • In conversation, ask learners to suggest what could be done in their communities to help reduce the causes of climate change and to mitigate or reduce the effects of climate change. Observe how well learners explain what they are doing and why, in relation to their investigations and fieldwork. Evaluate how effectively they can explain whether or not their actions can be replicated elsewhere. Ask learners to produce some diagrams of global warming. Observe how well their labels and descriptions explain the balance or greenhouse warming. Ask learners for suggestions how we can reduce the effects of climate change. In conversation ask them to explain their views.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• Learners identify some of the major causes of enhanced global warming and suggest ways that actions might address this; e.g. burning less fossil fuel – what other forms of energy might be used instead? Learners think about ways to first address reduction and careful use of energy, and then how energy might be produced in more sustainable and renewable ways. Learners research important global agreements and use their new knowledge to discuss why some countries might not want to sign up. • Learners use photographs, Internet and fieldwork to compare local climate change issues with those in another region of Africa and the world. They think about geographical similarities and differences. -Which issues are the same? Which are different? • Learners should read reports about the effects of climate changes on people's lives and ecosystems. They should begin to draw conclusion about how to most effectively mitigate these issues. • Learners carry out fieldwork in and round the school and local community and identify some positive actions that can be taken, mapping them and creating an action plan that can be carried out. **What is climate change?** • Ask learners if they have ever heard that the climate is changing. • Ask learners to ask old people, especially farmers and people who fish, whether they have noticed any changes in the weather patterns or seasons in recent years. • Explain that there is evidence that the climate and the seasons in East Africa are not the same as they used to be e.g. it seems that there are more and longer droughts and more floods, and the wet and dry seasons do not always come on time.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Causes of climate change • Explain that there is evidence that climates are changing all over the world • Scientists believe that this is because we are sending too many gases into the atmosphere which absorb heat, causing the atmosphere to get hotter i.e. we are causing pollution in the atmosphere. These are called greenhouse gases. • Ask learners what actions by people cause greenhouse gases to go into the atmosphere and where these gases go? Why has this increased in the last 100 years? (smoke from fires, smoke from factories, exhaust fumes from vehicles, our own breath, waste fumes from animals – increased due to more people, more factories, more vehicles, more animals) • Ask what happens if you are in a room with closed glass windows on a sunny day. Why do people in cold areas sometimes grow crops in houses made of glass? These are called greenhouses. • Use diagram and questions to explain the effect of these gases in the atmosphere: Heat from sun passes through the atmosphere and heats the Earth; the Earth gives off heat and heat passes back through the atmosphere to space; certain gases including carbon dioxide and methane absorb the heat and prevent it from escaping, so the atmosphere above us becomes hotter. Some greenhouse warming is necessary to keep the Earth warm enough to sustain life, but this rapid increase through the rapid release of additional greenhouse gases is a problem. Compare to a greenhouse. This makes the world hotter and also affects the winds in the atmosphere, which cause other changes to the climate. Learners copy diagram.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Effects of climate change and how these can be prevented • Explain main effects of climate change: some places become hotter, some become drier, dry seasons become longer, more rain storms, cyclones or hurricanes and floods. • Ask learners to explain why climate change is likely to lead to food shortages in some areas. • Ask learners to suggest how climate change can be prevented or slowed down? (By sending fewer greenhouse gases or less pollution into the air i.e. burning fewer fires; factories give off fewer gases; fewer vehicles or make vehicles give off fewer exhaust fumes). • Explain that most countries in the world have signed international agreements (e.g. the Paris agreement) to reduce the amount of greenhouse gases or heat-causing gases they produce. But these are only voluntary agreements and not all countries carry them out. In 2017 the country giving out the most gases, USA, withdrew from the agreement. • *Learners look up the Paris agreement or any other agreement on climate change on Internet and summarise main parts of agreement.* **What can East Africa do to help prevent climate change?** • Ask learners whether East Africa gives off many gases which cause climate change. What are the main gases we give off? Explain answers. (No -because population is small compared with many other countries and we have fewer industries and vehicles. Main gases here are from cooking fires) • Ask learners how East Africans can help to reduce greenhouse gases. (using better cooking stoves, solar power for cooking, use less charcoal, which destroys forests) **Reducing the effects of climate change.** Discuss the following issues: increasing the use of irrigation during droughts and dry seasons; growing crops more suited to drier seasons; scientists breeding special crops which can live with less water; planting more trees which absorb carbon dioxide.	

WORLD CLIMATES; INTRODUCTION TO NORTH AMERICA; AGRICULTURE IN EAST AFRICA AND NORTH AMERICA (The Great Lakes region and California): TOPICS 11 – 14: 36 PERIODS

SENIOR 1: TERM 3 **Theme: World Climates: Introduction to North America; agriculture in East Africa and North America**

TOPIC 11: MAJOR CLIMATIC ZONES OF THE WORLD — 8 PERIODS

Competency: After studying this topic, the learner should be able to locate and describe the major climatic zones of the world and understand the relationship between climate and human activities and the lifestyles in each zone.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. know the names of some of the major climatic regions of the world (k)
b. understand the main characteristics of the climates and how each affects the vegetation of the area (u)
c. understand the factors influencing these characteristics (u)
d. understand how people's ways of life are influenced by the climate in each region (u)
e. plot the major climatic regions on a world map (s)
f. recognise each type of region on photographs (s)
g. understand how the traditional farming and way of life was influenced by the climate (u)
h. appreciate that people's lifestyles are influenced by the type of weather and climate (a)
i. appreciate that this influence is becoming less as technology helps people to overcome difficulties of their climate and as people move into urban areas. (a, gs)
	Factors affecting climates
	• Learners describe climate of theto local area including the different seasons.
	• Ask: what factors influence the climate and the seasons i.e. what causes the climate to be like it is and what causes the different seasons?
	• Learners suggest how the climate is affected by the following:
	  • distance from the equator
	  • distance from to a lake
	  • height above sea level
	  • relief i.e. flat or hilly land
	  • winds
	  • changes people have made to the vegetation
	• In pairs, learners:
	  • choose any other area of Uganda with a different type of climate to that of your own locality
	  • describe this type of climate
	  • show the difference between the two types and the reasons for the differences.
	• Pairs work with another pair to describe how the differences in climate affect the ways people live in the two areas.
	• Using the examples given by learners, and examples of other climates, elicit and where necessary, explain how each of the following may affect a climate
	  • distance from equator/latitude (temperature)
	  • distance from lake or sea (temperature/ rainfall)
		• Ask learners to describe the climate of their home area and explain how it is influenced by the different things they have learnt about in this topic. Note their ability to do this effectively.
		• Monitor pair work, offering assistance where necessary.
		• In conversation, learners suggest one effect that each of the major climatic regions of the world might have on the way people live and are able to offer an explanation.
		Ask learners to produce a table which outlines the types of climate. Observe how well the table provides accurate information about these climates.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• height (temperature) • prevailing or normal winds (temperature/ rainfall) • relief (rainfall) • vegetation (rainfall/ temperature) • human activity / clearing natural vegetation, especially forest or trees (rainfall/temperature) • Explain that other aspects of climate are affected mainly by rainfall and temperature e.g. sunshine, cloud cover, humidity **Major climatic regions and characteristics** • Explain that broadly there are four types of climate depending on distance from the equator: • tropical: equatorial (near equator) • savannah: (between equator and tropics) • desert: (near the tropics) • temperate (north and south of tropics) • polar: (near the poles) • Show these areas on a wall map or sketch map of the world on BB or look up types of climate on Internet • Ask learners what they can deduce about the differences between each type of climate • Explain that distance from the equator mainly affects temperature • Explain: Rainfall is mainly affected by distance from the sea and wind direction. So, in each of the above, places near the sea are wet and those inland are drier. • Show the following types of climate on a world map and learners summarise on a table: • equatorial: hot, wet • tropical savannah: hot with wet and dry seasons • tropical desert: hot and dry • temperate coastal: cool and wet • temperate inland: cool and drier • polar: cold and dry • Show photographs of each type of climate and learners identify the type of climate with reasons. • *Learners research the type of climate on the Internet, thinking about sources and comparing information.*	

SENIOR 1: TERM 3

Theme: World Climates: Introduction to North America; agriculture in East Africa and North America

TOPIC 12: GEOGRAPHICAL REGIONS OF NORTH AMERICA — 6 PERIODS

Competency: After studying this topic, the learner should know the main physical features, drainage, and climates of North America and brief history of North America.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. know the countries of North America (k)
b. understand the main physical features of North America (s)
c. know the main climatic regions of North America (s)
d. understand how the size and position of North America makes it different from East Africa (s)
e. understand how and why North America has developed differently from East Africa (u)
f. draw a sketch map showing the countries and main regions of North America (s)
g. appreciate the usefulness of learning about areas outside East Africa or Africa to contrast with East Africa (a, gs)
h. appreciate that all areas of the world are different, depending on their position and history (a, gs)
j. describe some climatic regions of North America, using climate graphs and compare these to East Africa (s)
	Why study areas outside East Africa or Africa?
	• In pairs, learners discuss what they think is the use of studying areas of the world outside East Africa or Africa.
	• Pairs feed this to a whole-class discussion: this may include general interest; learning from others; learning new ideas and ways of development; we may go overseas for study; we hear about other countries on radio, TV or in videos; the interdependence of the world – we all rely on each other e.g. for trade and politics, we are all part of United Nations and what happens in another places may affect us
	• Explain that in geography we are going to study three areas outside Africa: parts of North America, parts of the Rhinelands, which is part of Europe, and parts of China.
	Features of North America
	• In pairs, learners have a large blank outline of North America and a list of features you wish them to learn about. Give them a timed challenge to mark them on the map, along with any other additional information that they think they know. Compare maps as a whole class, and remark on initial understanding, then give the pairs a timed period to research atlases, globes and the Internet to create a new map with the features correctly located.
	• Use a wall map, BB map or atlas if available (or Internet) to ask about and show main features of North America (note: main features only, not a detailed study of N. America):
	  • countries (USA, Canada, Mexico, West Indies);
	  • physical features (Rocky mountains, Great Plains, Appalachian mountains, Mississippi/Missouri basin, Plains of northern Canada);
	  • rivers and lakes (Mississippi/Missouri, Great Lakes);
		• Learners speak about their own views and identify some influences from North America, especially USA, on East Africa, including their own lives?
		Remind learners to think about economic influences (things you buy) and cultural influences (things you view or listen to).
		• Observe as learners compare North America with Africa, showing the main differences in terms of features and climate and explain why this is so.
		Ask learners to produce a model or infographic to describe features of North America. Observe which characteristics they have chosen to represent and how accurate their information is.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• important states: Texas, California, New England; • important towns: New York, Washington, Chicago, San Francisco, Los Angeles. • When learners have located these features correctly on their map outlines or sketch map – drawn or digital, ask them to continue their research and find out about the type and location of major relief features. • Ask learners if North America is bigger than Africa; has higher mountains; has bigger rivers; has bigger towns? • Working in groups, learners use drawn or digital maps or both, each group taking a climate zone of North America and using climate graphs, they describe, compare and contrast the climate overseas with that in Africa. **Climate of North America** • Use climate graphs of North America e.g. southern USA; east coast; Great Plains; northern Canada; central California. Learners describe climate of each area. How are climates different from those of East Africa? Colder or very cold; generally less rain. Learners suggest reasons: in northern hemisphere outside tropics; many areas far from sea. • Locate and name areas on map (Note: learners get general impression of North America, not detailed geography).	

SENIOR 1: TERM 3 **Theme: World Climates: Introduction to North America; agriculture in East Africa and North America**

TOPIC 13: DEVELOPMENT OF AGRICULTURE IN EAST AFRICA 14 PERIODS

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. carry out a field study to find out the nature of the land and water resources in the local area and the use of land and water resources for agriculture (s) b. understand the main types of agriculture in Uganda and the rest of East Africa and the factors influencing them (u) c. appreciate the importance of land and water as a source of food, livelihood and income for families, clans and communities (a) d. Understand the differences between subsistence and commercial agriculture, and small scale and large- scale agriculture. (u) e. understand the advantages and disadvantages of each of the main types of arable agriculture. (u) f. know the characteristics of traditional pastoral farming. (k) g. understand the advantages and disadvantages of commercial pastoral farming. (u) h. form opinions about the dangers of over-use of land and water resources and the need to conserve these in the local area i. recognise different types of farming from photographs (s) j. draw diagrams to show seasonal activities on farms (s) k. draw maps to show different types of farming (s) l. appreciate the importance of agriculture in the economies of East Africa (a, gs) m. appreciate the need for government policies which assist farmers and develop farming (a, gs) n. appreciate that caring for and preserving resources in the local environment, community and country are signs of love for one's country	**Field work on farming** • If possible, learners visit a farming area, or think of any farming area they know, and report on the size of farms, type of farming, crops grown, and animals kept, methods used etc. Learners ask farmers what their main problems are. • Learners collaborate in groups to research different kinds of farming and make judgements about the relative importance and appropriateness of each type for the location and terrain. They present their findings to other groups and answer questions about ways to improve. Learners use maps, photographs, graphs and diagrams to support their presentation. **Types of farming** • Learners explain what they understand by subsistence and commercial farming; small scale and large- scale farming. • Learners describe what type of farming is the most common in Uganda • Learners decide how each of the following factors affects farming in an area they know: climate, soils, relief, money (capital), market for produce, transport, labour, technology and tools used • Revision: learners explain shifting cultivation or bush fallowing and why it was practised traditionally. • From the examples studied above, learners decide whether most farming in Uganda and East Africa is: small scale or large scale; subsistence or commercial or both. • Ask learners to describe the dangers of soil erosion, the causes of it, and suggest ways it can be prevented. In conversation, ask them to clarify their views.	• Observe learners as they describe any farm in East Africa, the methods used, problems encountered and suggest ways of improvement. • Ask learners to imagine that they were the Minister of Agriculture in an East African country. Observe how well they are able to write a policy or list of ideas about how to improve agriculture in that country. • Observe in the conversation how well they contribute and can clarify their views. Observe how practical and relevant their ideas are in this conversation. Observe how appropriate their suggestions are, and prompt learners to expand on them where helpful. Evaluate how appropriate their ideas are, and how well they can explain their views.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
o. understand possible ways in which local communities and governments can reduce the effects of climate change (u) p. take part in activities to improve local land and water resources	**Small holdings** • Use a map and/or photograph to help learners describe and explain a small holding growing crops for subsistence and for sale. • Learners list the cash crops commonly grown on small holdings in different parts of East Africa. • Discuss the advantages of this kind of farming, including mixed cropping. • Learners explain the problems caused by increasing population, overuse of land and soil erosion. • Discuss methods of conserving the soil, including conservation farming. • *Learners look up soil conservation on Internet and describe how it applies to East Africa.* • Tell learners to imagine that they have inherited a small area of land in their home area in Uganda. In conversation, ask them to suggest how they would farm it in order to provide a good income. **Large scale farming and plantations** • Use a map and photographs to show large scale commercial farming or plantation farming and discuss the characteristics of this. Elicit this information from learners, and expand where necessary. • Whole-class discussion of the advantages and disadvantages of plantation farming • List the crops usually grown on plantations and suggest reasons for this • On Internet, learners find a photo of plantation farming in East Africa and describe what they see. **Pastoral farming and ranching** • Whole-class activity: Use a photograph for learners to describe traditional pastoral farming and its characteristics. • Discuss the advantages and challenges of traditional pastoralists changing to partly commercial farming by sale of cattle and milk. • Use a photograph to explain small scale commercial dairying and discuss the advantage of this. • Use maps and photographs to explain large scale commercial ranching. Elicit and discuss the advantages and disadvantages of this, with specific examples.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

	Improvement of small-holder farming
	• Learners discuss the problems of small holder farmers in groups.
	• Groups feed ideas to whole-class discussion:
	  • suggest how the problems of small holders can be solved and small holder farming can be improved including the following:
	  • government policies,
	  • co-operative societies,
	  • better transport and marketing etc.
	• Discuss and suggest solutions to the problems of climate change, including increased drought
	• Explain with photographs different kinds of irrigated farming
	• Explain and discuss the advantages of developing industries to process the products of farming
	The importance of irrigation
	• Ask learners, from what they have learnt about climate change, why is irrigation an important method of farming?
	• In conversation, ask learners to suggest reasons why we should increase irrigation in Uganda and suggest the best methods to do this.
	• Using photographs and diagrams learners describe the methods of irrigation:
	  • drip irrigation by fetching water from a water source in plastic bottles or other containers and dripping the water onto the plants;
	  • building small dams to trap the water in the wet season so it can be used in the dry seasons;
	  • damming streams or rivers to trap water;
	  • building water channels to distribute the water to the plants.
	• *Learners look up types of irrigation on Internet and describe whether each of these is suitable for East Africa, giving reasons.*
	• Ask learners to describe any areas where they know these methods are being used. Which methods might work in their home area and what might be the difficulties?
	• Provide learners with a range of contrasting photographs about farming. Ask them to rank them in order of effectiveness and yield. In conversation, ask them to explain their views.	

SENIOR 1: TERM 3 **Theme: World Climates: Introduction to North America; agriculture in East Africa and North America**

TOPIC 14: SOME AGRICULTURAL AREAS OF NORTH AMERICA: LARGE SCALE FARMING IN THE PRAIRIES; IRRIGATED FARMING IN CALIFORNIA

8 PERIODS

Competency: After studying this topic, the learner should know and understand the main differences between agriculture in North America and agriculture in East Africa and whether methods used in North America are appropriate for Uganda.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know some important types of agriculture in North America; important crops grown and animals kept (k) b. understand the main differences between agriculture in North America and East Africa and the reasons for these differences (u) c. suggest whether some agricultural methods from North America are suitable for East Africa (v/a) d. use a range of sources including maps, photographs, Internet tables and graphs to research relevant information (s) e. locate the main types of agriculture on a map of North America (s) f. appreciate why methods of agriculture used in North America are not always suitable for Uganda (a, gs) g. appreciate that development of agriculture depends on the level of economic development and technology (v/a, gs)	**Basic difference between agriculture in North America and East Africa** • In groups, learners brainstorm useful questions that will help them answer the big question about the difference between agriculture in North America and East Africa. These questions will be about workforce, type of crop, agricultural practices, soils, relief and climate and policy. • Still in groups, learners use a mix of given and researched evidence to gain a general overview to investigate a particular region and write a case study report. Learners use their case studies to contrast and compare agricultural practice between different regions. • Groups make a presentation of their work to the class. • Use a table of the percentage of people in USA and Uganda working in agriculture, industries and services. Or learners find this information from internet. Ask learners to find the differences. (In Uganda most people work in agriculture. In USA only a very small percent work in agriculture.) • Ask learners what this shows about the different methods of agriculture. (USA mechanized; Uganda hand methods with hoes) **The Prairies** • Explain that one of the main agricultural areas in USA and Canada is the Prairies. This is part of the Great Plains. Locate on map already drawn. • Look up a Prairie farm on internet and summarise the information found. • Use photograph(s) of wheat farm on Prairies. (Large wheat field showing harvester + silo storage and railway line).	Monitor brainstorming to see how relevant learners' questions are. Evaluate reports to ensure learners have understood the topic. Evaluate the presentations for see how well they have absorbed and used the information they found out. • Observe learners as they describe the main differences between large scale extensive farming in the Prairies and irrigated farming in Central California; they explain whether some farming practices would be good for East Africa and give reasons. Learners back up their explanation with examples from their research. • Observe learners debate on the best way to improve agriculture in East Africa: by large scale mechanized farming or small-scale intensive farming? Help groups, where necessary, to arrive at these conclusions. Monitor pairs and prompt, where necessary, to help them achieve outcome. Observe how well learners have processed learned information to achieve this task.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

	• Learners work in pairs to study the photo(s) and answer the following:
	  • describe the relief of the area.
	  • how big are the fields?
	  • how many different crops are grown?
	  • how are the crops being grown?
	  • how many people do you think are employed?
	  • are the crops probably grown for the farmer's use or for sale?
	  • what do you think the big building is used for?
	  • how is the crop transported away?
	  • where will it be taken?
	• Pairs feed answers back in whole-class discussion. Expand on this, using photographs: very flat area of very large wheat farms using machinery for cultivation. Only one crop grown. Commercial farming for sale only. Not a very high yield per hectare – extensive farming. Has led to over- use of land for one crop and severe soil erosion – 'the dust bowl'. Wheat stored in silo and transported by railway to market in towns.
	• Learners list the main differences between this farming and most farming in East Africa.
	• Working in groups, learners discuss: could this method be used in most parts of East Africa? Why not? (Not enough land for one farmer, not enough money to buy machinery). Would this be a good method for East Africa? (Probably not –Very expensive. Needs a lot of land, not available in many areas. In tropical areas heavy rain washes away the soil when it is ploughed by large machines. Uses little labour: people would be displaced from villages. Where would other people go? Unemployed and drift to towns. Not very high yields – extensive farming).
	• Ask learners where has this type of farming been used in East Africa? (Kenya highlands) Who used it and how did they get land? (Europeans – land taken from Africans)	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

	Irrigated farming in Central Valley, California
	• Locate California on map, including Central valley.
	• Learners look back at climate graph for California used in topic 9. Ask learners to describe rainfall: total amount and seasons. Ask learners if there is enough rainfall all the year for crops needing heavy rainfall.
	• Use photograph of irrigated fruit/grape farming in Central valley. Or find a photograph of California: irrigated farming on Internet.
	• Put these questions on an OHP/BB and learners discuss in pairs:
	  • describe the land (flat).
	  • Is the farm large – as large as Prairies?
	  • What type of crops are being grown?
	  • they need water?
	  • How is water being supplied?
	  • Who will pick the fruit?
	  • Is much labour needed?
	  • Do you think crops are grown for sale or subsistence?
	• Elicit answers from pairs to begin whole-class discussion.
	• Explain how this is different from the Prairies: smaller farms using less land. But some are becoming bigger. Higher yields per hectare – more intensive. Intensive by using irrigation and fertilizers. Even larger farms are intensive. Use more labour.
	• Learners discuss whether this kind of farming would be good in East Africa. Advantages: uses less land and more labour, so less unemployment. More intensive i.e. higher yields per hectare. Uses irrigation, becoming more important in East Africa due to climate change and long droughts. Does not exhaust the soil.
	• Ask: is this type of farming used in East Africa? In places where farmers are using irrigation or fertilisers to make farming more intensive e.g. some fruit farming like passion fruit, citrus and some intensive use for other crops.	

MINING AND MANUFACTURING IN EAST AFRICA AND NORTH AMERICA (The Great Lakes region and Silicon Valley) TOPICS 15 – 17: 36 PERIODS

SENIOR 2: TERM 1

Theme: Mining and manufacturing in East Africa and North America

TOPIC 15: MINING IN EAST AFRICA — 10 PERIODS

Competency: After studying this topic, the learner should know what minerals are found in East Africa, and understand the methods used to extract them, the factors favouring mining and its contribution to the East African economy.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. understand what a mineral is and why some minerals are valuable (u) b. locate the main mining centres on the map of East Africa (s) c. know the main minerals occurring in East Africa and their amounts (k) d. understand the use of mineral resources in the development of any two industries in Uganda (u) e. understand the methods of mining used for different minerals and their problems (u) f. draw flow diagrams to show the main stages and methods of mining (s) g. recognise types and consequences of mining on photographs (s) h. understand the effects of mining on the environment (u) i. appreciate the positive and negative contribution of mineral resources to development (a) j. appreciate that the benefits of mining often go mainly to overseas companies or a local elite only (a, gs) k. understand the physical and economic problems facing mining (u) l. appreciate the need for strict laws to control mining physically and economically (a, gs)	**Minerals and mining** • Learners have five minutes to work in pairs to name things in the classroom or things they use made of minerals. • Pairs feed back to whole class. • Learners explain what a mineral is and give examples of minerals in East Africa. • Pairs group objects and artefacts that they might find in their community into minerals and non-minerals. Develop into whole-class discussion. • Ask learners whether all minerals are valuable and the difference between a valuable mineral and others • Explain that all rocks are made of minerals, but that mining is only concerned with minerals which are valuable because they have uses. • Show a map of the main mining sites in East Africa, and the minerals mined. Or look up mining in East Africa on Internet. • Learners work in pairs to make a list from this in four columns under each East African country: name of mineral, mining sites, uses of mineral, exported or used locally. (Note this should show only main minerals not every mineral and site) • Pairs compare their list with another pair to explain what their map and data show. **Factors affecting mining** • Explain that not all valuable minerals are worth mining • In groups, learners discuss how each of the following factors may affect whether a mineral is mined or not:	Listen to learners work pairs work to evaluate learners' understanding of minerals. Observe the tables completed by learners in order to explore how accurately they have described minerals. Evaluate how well learners have understood from class feedback, explaining and expanding if necessary to ensure all achieve the objective. • Observe diagrams produced by learners to explain the differences between open cast and underground mining, with examples from East Africa. • Observe as learners discuss the dangers of each kind of mining and the effect of each kind on the environment. • Learners explain with examples the contributions mining can make to the development of East African countries and the dangers of this development only benefitting a few people. Observe how well they are able to explain these dangers using examples and evidence.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• Size of deposits • Quality of mineral or ore • Nature of surrounding rocks • Depth mineral is found • Capital to develop mine • Skilled labour • Available power and transport • Market for mineral • Government policy • Technology • Conduct class feedback from groups and expand where necessary. **Types of mining** **Open cast** • Working in small groups and using the map, learners list examples of open cast mining in East Africa. • Use a photograph and draw a diagram of an open cast mine and learners use this to describe the mining. • Learners convert this into a flow diagram showing the stages. • Learners suggest the advantages and possible dangers of open cast mining. • Learners suggest how this may damage the environment. • Groups compare with other groups, then conduct whole-class discussion. **Underground mining** • Using the map, learners list minerals mined underground in East Africa • Use a photograph and draw a diagram. of an underground mine (Kilembe copper?) and learners describes the methods of mining. • Learners convert this into a flow diagram to show the stages of mining. • Learners suggest the advantages and possible dangers of underground mining. • Learners suggest how this may damage the environment. • Explain why Kilembe underground mine stopped for a long while and discover if it has re-opened.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Extraction of oil • Draw a series of diagrams to show the stages in the extraction of oil or learners look this up on Internet, and learners convert this to a flow diagram. • Learners suggest possible problems of oil extraction, how this may damage the environment and how this may be prevented. • Learners discuss the problems of compensation and ownership of land where the oil is found. **Who benefits from mining?** • Explain the British system of ownership of minerals now used in Uganda. • Learners suggest why development of mining, including oil extraction, is very expensive. • Learners suggest why this is mainly done by overseas companies. • Ask learners whether local people always benefit from mining and if not, why not. • Explain that in many countries the mines are owned by overseas companies and they pay taxes to the government. • Explain that sometimes taxes are kept or diverted to rich people by corruption. • Explain that this sometimes means that ordinary people in the country, including those owning the land where the minerals are found, may get little or no benefit, with all the money going to overseas companies or to important members of the government and other rich people. • Learners suggest how this may be prevented.	

SENIOR 2: TERM 1

Theme: Mining and manufacturing in East Africa and North America

TOPIC 16: DEVELOPMENT OF MANUFACTURING INDUSTRIES IN EAST AFRICA

12 PERIODS

Competency: After studying this topic, the learner should understand the advantages of developing manufacturing industries, the types and locations of manufacturing industries and the problems of developing manufacturing industries.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. understand what manufacturing industries are (u) b. know some types of manufacturing industries in East Africa and their locations (k) c. visit a local factory to find out how a factory works and show its effects on the environment (s) d. understand the factors influencing the distribution and development of any three manufacturing industries (u) e. appreciate the contribution of manufacturing industries in transforming primary products (a) f. appreciate the importance of developing industries to process raw materials exported from East Africa (a, gs) g. understand the effects of manufacturing industries on the environment (u)	**Types of manufacturing industries** • Ask learners what manufacturing industries are. • Learners give examples of manufacturing industries in the local area and other areas of Uganda, and suggest where the products of these industries are sold • Working in pairs, learners explain three types of manufacturing industry: those making goods for sale in shops (consumer goods); those making goods for sale to other industries (industrial/ producer goods); those processing agricultural raw materials or minerals (processing industries). • Pairs feed back to whole-class discussion. • Working in groups, learners give examples of each type of industry in Uganda or East Africa and their locations. Learners investigate where manufacturing industries are located in Uganda and East Africa and create maps to show this. • Groups present their maps to the class. • Where possible, learners should visit a manufacturing or processing industry and discover what it produces, raw materials, use of labour, capital and ownership etc. They carry out a field trip to investigate an industry and its effects on the environment, showing this with charts and diagrams.	• Observe whether learners can give a definition and an example. • Learners produce a map or poster to explain the location of industries, noting the type and how that influences where they are. Observe the accuracy of their explanations. Learners use evidence from their field trip to produce a report and assess any environmental impacts. Evaluate their charts and diagrams. Observe learners as they explain their recommendations with regard to given criteria. *They choose one of each of the following and explain the development of one example of this type of industry in East Africa: processing industry; industrial/producer goods industry; consumer goods industry. They explain the location; reasons for development; what is produced; markets; benefits to the area; problems.* • Evaluate flow diagrams and discussion to ensure learners can reach objectives. • Observe learners discuss a. the advantages of developing manufacturing industries in East Africa; b. the problems in developing manufacturing industries in East Africa. Monitor pair discussion, observing depth of their understanding. Use feedback session to further deepen this. Observe learners' debate to gauge how well they have understood the issues. Clarify where necessary. Evaluate case studies to assess learning outcomes.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

	Factors for the development of manufacturing industries
	• Working in small groups, learners:
	  • list things which are needed to develop a manufacturing industry, thinking of specific examples they know.
	  • use a range of sources to research manufacturing industry on Internet and apply the information to East Africa.
	  • make notes of the factors necessary for the development of industries (raw materials; land; water sources; power; capital; labour; transport; markets; government policy; political stability)
	  • draw a flow diagram to show the processes of industrial development from raw material to markets. (s)
	• Groups present their flow diagrams to the class. Ask questions of the learners to clarify any points not entirely clear on the diagrams.
	• Learners think of one or two industries in Uganda and write how each of the above factors is important in the development of that industry.
	• Learners work in groups to examine the problems and advantages of developing manufacturing industries and make recommendations as 'experts'.
	Processing industries
	• Explain that many industries in East Africa are there to process raw materials before they are sold for export.
	• Learners give four examples of these: two for agricultural raw materials and two for minerals.
	• Learners suggest the advantages of exporting processed or manufactured goods rather than raw materials.
	• Explain the idea of adding value to a product.
	• Learners suggest some agricultural products which farmers can add value to.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Industrial / producer goods • Suggest what kinds of materials are usually imported from overseas when we develop or build things like roads, railways, dams or buildings. • Learners explain why it is good to develop manufacturing industries for industrial/ producer goods for use by other industries • Explain using the example of cement in Uganda • Ask learners for their recommendations as if they were a Minister in charge of industrial development. What laws would they make to ensure that the development of manufacturing industries benefit the people of the local area? Learners discuss this in pairs, then present their ideas to the class. **Consumer goods** • Ask learners to give examples of goods made in Uganda for sale in local shops. • Ask learners to give examples of goods we buy from overseas which could be made in Uganda. • Learners explain the advantages of a "Buy Uganda Build Uganda" policy. **Problems of developing manufacturing industries** • Learners discuss the problems of developing manufacturing industries in East Africa (capital, power supplies, transport, skilled labour, political instability, competition from cheaper imported goods) • Ask learners to discuss or debate whether we should continue to import second-hand clothes from overseas. What are the advantages and disadvantages of this? • Ask learners what they know about the wages paid to people working in factories: are they adequate for people to live? • Explain the problem of overseas companies, or local companies, paying very low wages. Learners discuss whether there should be a minimum wage. • Ask learners where people who work in manufacturing industries live? Do they live in good conditions? Why do people from rural areas come to work in manufacturing industries?	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• Explain the problems of rural-urban drift and the creation of slums. • Ask learners if they know a manufacturing industry. Does it produce waste or pollution? If, so what kind and where does it go? • Discuss the problems of waste and pollution from factories. Ask learners which particular kinds of places are polluted. • Discuss the dangers of pollution of lakes and wet lands, especially Lake Victoria. • Learners debate an imagined scenario in which a new cement factory is to be built, some arguing in favour and some against. How well do they understand the processes involved and the pros and cons for workers and the environment? **Case study of manufacturing industry** • Choose a manufacturing industry which learners should be familiar with and help them to develop a case study of the industry mentioning all the ideas learnt so far. • To help with this, ask them to work in small groups to look up one of the Uganda cement industries on the internet. • Ask learners to select and explore another industry in order to be able to further debate the challenges of developing manufacturing industries in East Africa. Observe how informed their arguments are.	

SENIOR 2: TERM 1

Theme: Mining and manufacturing in East Africa and North America

TOPIC 17: MINING AND MANUFACTURING INDUSTRIES IN NORTH AMERICA (THE GREAT LAKES REGION AND SILICON VALLEY) 14 PERIODS

Competency: After studying this topic, the learner should understand the importance of mining and manufacturing industry in North America especially the Great Lakes region and Silicon Valley and what we can learn from that for the development of industries in East Africa.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. know the position of the Great Lakes region of North America and the main towns and industries there (k)
b. know the main minerals in the Great Lakes region (k)
c. know the position of Silicon Valley and the main industries there (k)
d. understand the reasons for the development of industries in the Great Lakes region (u)
e. know the importance of mining in this area (k)
f. understand how mining and manufacturing industries are linked (u)
g. understand the consequences of the development of industries in this area (u)
h. understand the reasons for the decline of the traditional industries (u)
i. understand how new technology is changing industrial development (u)
j. understand the reasons for the development of industries in Silicon Valley (u)
k. understand what East Africa can learn from the decline of the Great Lakes area and rise of Silicon Valley (u)
l. appreciate that technology is changing industry (a, gs)
m. appreciate that East Africa has a lot to learn from changing technology in industrial development (a, gs)
	Mining and natural resources in the Great Lakes region
	• Use the atlas, an Internet map or a BB sketch map to show the Great Lakes area.
	• Learners draw the map, showing:
	  • the Great Lakes
	  • international boundary
	  • mining areas including iron ore and coal
	  • agricultural areas including corn belt, cattle areas and dairy belt
	  • main industrial towns
	• Ask learners to suggest from the map what advantages the Great Lakes region had for the development of industries. What kind of industries do you think were developed? Give reasons.
	Mining and manufacturing industries
	• Learners use Internet to look up mining and manufacturing in Great Lakes region
	• Show on map and explain: Three areas of minerals:
	  • coal to the south in Appalachian Mountains;
	  • iron ore to the north of Lake Superior;
	  • oil south of Great Lakes.
	• Use pictures of iron ore mining and coal mining. Ask learners what method of mining is being used.
	• Ask learners what sort of manufacturing industry uses iron ore as a raw material and coal as a source of power?
	• Ask learners to find out what steel is and what it is used for.
	• Consolidate some facts about steel use - almost all machines including cars and other vehicles use steel.
	• Challenge learners to identify the links between the iron and coal industry, the production of steel and the development of car and vehicle industries, especially in Detroit, and with other machines made.
		• Observe learners as they explain what sort of industries developed in the Great Lakes region and where and why.
		• In conversation, ask learners to suggest realistic advantages of the Great Lakes' region in relation to industrial development.
		• Observe the accuracy of the links in the learners' diagrams.
		• Observe as learners give their views about whether good ideas are more important than raw materials in the development of industries?
		• Observe learners' discussions about whether start-ups might succeed in Uganda. Can learners talk about present technology and entrepreneurial skills in this context?

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• Explain that later oil was drilled and also used for power in industries. • Ask learners to produce a diagram showing the links between location, resources (iron and coal) and car production; and explain what it shows. **Agricultural processing industries** • Show photographs of corn growing, cattle being reared and dairy cattle being milked. Ask learners in which kinds of processing industries are these products used? (corn fed to cattle which are sold or put in tins for meat; dairy cattle used for milk industry for fresh milk or tinned and powdered milk) • Learners work in groups to use the internet to research some facts about *agriculture in Great Lakes region*. • Ask learners what kinds of places people who work in industries live? From what you have learnt, do many people work in agriculture? • Ask learner to identify some of the big cities around the Great Lakes and offer ideas as to why they are there. e.g. Detroit, Chicago, Toronto, Pittsburg. • In pairs, learners identify what people in cities might need and how this has fuelled the need for services. (Ask learners to think of Kampala or another city). • Pairs feed back to class. • Explain that most people work in services, providing people in the factories with things they need e.g. education, health services, trade (shops), transport, banking and financial services. **Comparison with Uganda** • Ask learners to discuss what they have learnt and suggest similarities and differences between industries and towns in Uganda and North America. **Decline of traditional industries** • Explain that some of the traditional industries in the Great Lakes region have been declining, mainly steel and manufacture of vehicles. Ask learners to suggest reasons for the decline, working in groups and then check to see how many they got right. • Ask learners to suggest how changes in technology can lead to the decline or rise in industries.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	i.e. This is due to; • Some of the minerals are partly used up and more difficult to mine e.g. only the coal further underground is left • Other countries, especially China, Japan and Mexico can now produce vehicles more cheaply because they have newer machinery and technology and pay their workers less. So, people in USA buy more cars from there. • Learners suggest what problems are caused when industries decline. (Unemployment, poverty, crime, slums etc.) How are these problems similar to the problems of towns and cities in East Africa? **Rise of new technologies: The Silicon Valley** • Explain that there is a new industrial area in California. This contains companies like Micro-soft, Google, Face book etc. Ask learners what sort of companies these are. • *Learners look up and read about Silicon Valley on internet* • Explain that all these companies are based on new technology using computers, mobile phones etc. They are situated in Silicon Valley in California because it is near many very good universities which have skilled people in computers etc. and it is also a pleasant place to live. • Explain that these companies are based on skill and ideas, not on raw materials like older industries. They are based on 'ideas' or 'start-ups' and good entrepreneurs. • Class discussion on whether start-ups might succeed in Uganda. • As a class, discuss whether good ideas are more important than raw materials in the development of industries? • Ask learners whether such industries based on technologies can be started or have been started in East Africa. • Learners explain with examples new start-ups which have started in East Africa. • Use the internet to find information on Uganda entrepreneurs and start-ups • Ask learners to discuss and explain what else apart from good ideas is needed to develop an industry? Do all start-ups succeed?	

FISHING, WILDLIFE CONSERVATION AND TOURISM IN EAST AFRICA AND NORTH AMERICA (British Colombia) TOPICS 18 – 20: 36 PERIODS

SENIOR 2: TERM 2 Theme: Fishing, wildlife conservation and tourism in East Africa

TOPIC 18: SUSTAINABLE USE OF FISHERIES RESOURCES IN EAST AFRICA 10 PERIODS

Competency: After studying this topic, the learner should know the main fishing areas in East Africa, factors affecting the development of fishing, types of fishing and the contribution of fishing to the economy, the dangers facing fishing and ways to make it sustainable.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. understand the main types of agriculture in Uganda and the rest of East Africa and the factors influencing them (u)
b. know the major fishing areas in East Africa, inland and on the sea (k)
c. understand the main methods of fishing and types of fish caught (u)
d. understand the factors favouring fishing in East Africa (u)
e. know the differences between traditional and modern fishing methods (k)
f. describe the characteristics, trends, benefits and problems of fishing in a local area
g. understand the factors affecting the choice of methods (u)
h. understand the dangers of over-fishing and how this can be prevented (u)
i. understand the factors causing damage to fishing grounds, including pollution and how this can be prevented (u)
j. know some methods of preserving fish after catching (k)
k. understand the methods of farming fish and their help in conserving fish stocks (u)
l. describe the marketing of fish
m. understand the methods of conserving fishing grounds (u)
n. draw diagrams to illustrate methods of fishing (s)
	The fishing grounds of East Africa.
	• Ask learners to name areas where people fish in East Africa. What sorts of places are they?
	• Explain two types of fishing areas:
	  • the sea and coast
	  • lakes and rivers.
	• Use wall map, BB sketch map or atlas map to show main fishing areas.
	• Learners copy map as sketch map or create digital maps.
	Methods of fishing
	• If possible, learners visit an area where fishing takes place. Find out what fish are caught, what methods are used, where and how the fish are sold, what problems the fishing people have etc.
	• Whole-class discussion: learners tell class what kinds of methods of fishing they have used or observed. Volunteers sketch these on BB and explain methods.
	• Learners use artefacts, where possible, and research images of traditional fishing methods.
	• Learners draw annotated diagrams of the equipment using sources like these, and research the methods used. (spears, nets, fishing lines, traps, baskets, bow and arrow)
	• Learners use photographs, video and other research to help them draw annotated diagrams of modern methods and explain these (trawling, drift nets, dynamite blasting). Or learners could annotate digital images.
		• Observe as learners sketch and explain methods of fishing, using appropriate language and identifying some of the problems associated with different methods.
		Monitor group discussions to gauge learners' understanding. Add information if necessary to develop their thoughts.
		Observe learners' discussions and prompt them if they need help getting started. Evaluate how well they can contribute to the discussion.
		• Ask learners to imagine that they are the Minister in charge of fisheries. Ask them to make up a policy for Uganda to get the best income from fishing that will also help preserve fish stocks. Observe the relevance of their policy.
		• Observe learners as they discuss the methods and benefits of fish farming, making links between health, jobs and the environment.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

o. use statistics to show the decline in fish stocks and fish catches (s)
p. appreciate the dangers facing fishing in East Africa, including over-fishing, poor methods and pollution (a, gs)
q. appreciate the need for strict laws and enforcement to preserve fish stocks (a, gs)
	• Learners use Internet to find out about *fishing in East Africa*
	• In groups, learners discuss the advantages and disadvantages of each method and whether traditional or modern methods are best for conserving fish.
	• Explain dangers of some modern methods, (drift net and blasting) and why these are banned.
	• Learners suggest dangers of using nets with small holes and catching too many young fish and why people do it.
	Preservation of fish
	• Learners brainstorm what they know of methods of preserving fish so they can be sent long distances to markets (smoking, salting, sun-drying, canning, refrigeration)
	Factors favouring fishing
	• Group learners and ask them to discuss what they think will encourage fishing:
	  • well stocked fishing grounds
	  • different species
	  • markets and transport to markets
	  • capital to buy fishing gear
	  • government policy to enforce laws against over-fishing and pollution
	Benefits of the fishing industry
	• In groups, learners discuss and list what benefits the fishing communities and the country can get from fishing:
	  • income for individuals and country through exports
	  • employment
	  • better diet
	  • useful raw materials (fertilizers, animal feeds, medicines etc.)
	Problems of the fishing industry
	i. Ask learners to discuss the dangers to fishing in East Africa:
	  • over-fishing
	  • catching young fish
	  • pollution of water by human waste and chemicals from farming (fertilizers etc.) and industries.
	  • not enough capital to buy good equipment
	  • no transport to market	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

	Improvement of fishing
	• Learners discuss how these problems can be solved:
	  • limiting number of licensed fishing people
	  • strict law and enforcement against catching young fish and pollution
	  • cooperative societies
	  • build road
	Fish farming
	• Explain that one way to increase fish production is to farm fish.
	• Use picture(s) of fish farm to explain how fish are farmed and benefits of fish farming.	

SENIOR 2: TERM 2 Theme: Fishing, wildlife conservation and tourism in East Africa

TOPIC 19: WILDLIFE CONSERVATION AND TOURISM IN EAST AFRICA 12 PERIODS

Competency: After studying this topic, the learner should understand the need for conserving wildlife, why tourists come to East Africa, what facilities they want, the benefits we get from tourism and how we can encourage more tourists to come.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. know what is meant by wildlife (k)
b. know the meaning of National Park, game/wild life reserves, sanctuaries, historic and prehistoric sites (k)
c. understand the factors influencing the development of tourism in Uganda and the rest of East Africa (u)
d. understand that tourism is an important form of trade (u)
e. understand what a tourist is, why they come and the facilities tourists need (u)
f. understand the benefits of tourism and its possible benefits to young people (u)
g. know the main tourist attractions of East Africa and locations of the main tourist areas (k)
h. study a tourist attraction or potential tourist attraction in the local area through field work
i. guide visitors and tourists around attractions in the local area or any other area
j. know where most tourists to East Africa come from (k)
k. understand the meaning of domestic tourism
l. represent the statistics about tourism using simple graphs (s)
m. understand why we should preserve wildlife and the challenges facing wildlife conservation in East Africa (u)
n. understand why tourists are particularly interested in natural scenery and wild animals (u)
o. appreciate that tourism can bring both benefits and problems
p. understand the challenges facing tourism in East Africa (u)
q. understand the problems which can be brought by tourism
r. appreciate the need for conserving wildlife (gs)
	Wildlife conservation
	• In pairs, with the word "wildlife" on the BB, learners decide on a definition of the word. Then pairs tell class their definition.
	• In pairs, learners discuss why wildlife in East Africa is rapidly being destroyed (population increase, clearing for farming, poaching etc.)
	• Pairs contribute their ideas to a whole-class discussion.
	• Ask what the consequences of failing to conserve wildlife are.
	• Learners recognise some threats to wildlife and suggest ways to conserve this in East Africa.
	• In pairs, with the word "tourist" on the BB, learners decide on a definition of the word. Then pairs tell class their definition.
	• Class discuss how wildlife and tourists are connected.
	• Learners use photographs to identify important tourist attractions and draw a map to show the main national parks and other tourist areas in East Africa.
	Why do tourists come?
	• Learners discuss in small groups:
	  • Are all people who come to East Africa tourists?
	  • What other kinds of people come (tourists come for pleasure only. Others come on business)
	• Ask learners where they would like to go if they had the money to become a tourist.
	• Do tourists come to East Africa to see the kinds of things you want to see? Why not?
	• Explain that tourists mainly come from industrialized countries where they may live in big polluted cities, so they like to see natural areas and wild life. East African tourists might like to see big cities because they live in rural areas.
	• Learners use Internet to find tourist attractions in East Africa.
		• Note learners' definitions of wildlife. Lead them to an agreement. and tourists and explain how they are connected, giving examples.
		• Evaluate learners' contributions for clarity and relevance.
		• Note learners' definitions of tourist. Lead them to an agreement. Note how they make the connection between wildlife and tourists. Give examples if necessary to consolidate their understanding.
		• To assess and consolidate understanding, learners think of any areas of Uganda that they know well and write a short essay suggesting what tourist attractions it has or could have, and how they could attract tourists, or more tourists, to the area. Observe the writing they produce in order to evaluate how well they understand they key features of tourism.
		• Evaluate sketches or digital maps.
		• Evaluate learners' job descriptions.
		• Observe learners' plans and monitor role-play. Intervene if necessary to ensure achievement of objective.
		• In conversation, ask learners to use what they have learnt to suggest the best ways to attract more tourists to East Africa. Evaluate the depth of their knowledge and broaden it if necessary.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
s. appreciate the need for ensuring political stability and security if we are to develop tourism (a, gs) t. understand that, in attracting tourists, we are always competing with other countries (u)	• Learners make sketch or digital maps to show the location of key features that might attract tourists to East Africa and select one attraction to create a sketch map suitable for a tourist brochure. They discuss which features might be the most important and why. • Use photos of tourist attractions and tourist activities. (National/Game parks, game/wildlife reserves, wild animals, beaches and sea, sunshine, surfing, fishing, mountains, rivers with waterfalls) • Learners suggest other kinds of areas which attract tourists (historic and pre-historic sites; religious places; places and people with traditional culture.) They identify jobs associated with tourism and write a job description for one. They identify and discuss pros and cons of tourism and draw a diagram to show how different groups of people benefit from tourism. **Tourism in the local area** Learners individually think of an area they know e.g. the area round the school or their home area and investigate through fieldwork. Decide on what things in the area are or might be good for tourists. What activities might tourists be encouraged to do? How could the people of the area encourage tourists to come? • Learners use their findings to plan a day's activity as though they were a guide. • Learners work in pairs and role -play one being a tourist, and the other persuading them to go on the day activity they have designed. Then they swap roles. **Where do tourists come from?** • *Use internet to find statistics of tourist arrivals and origins of tourists in East Africa* • Explore statistics of tourist arrivals and origins of tourists for one or all East African countries. Learners design graphs and analyse these to show tourists arrivals and origins. They could map the statistics if relevant software is available. • Explain that tourists come from industrialized countries, especially Europe which is traditionally linked to East Africa and is close. Also, North America and increasingly China, Japan and South Korea as those countries become more industrialized and richer.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Why is East Africa popular for tourists? • Use wall map of East Africa and ask learners to list main areas tourists go to. Ask why East Africa is popular for tourists. • Explain that East Africa has some of the best game parks and game reserves, coastlines and coral reefs, mountain scenery and rivers and lakes in Africa • Ask: what else attracts tourists? Good development of facilities: hotels, lodges, roads, tourist transport companies etc. **What are the challenges facing tourism?** • In groups, learners discuss why sometimes tourists do not come to some parts of East Africa and the dangers which may spoil tourism. • Ask why tourists no longer go to some parts of the Kenya coast e.g. north of Malindi (political instability e.g Al Shabab; rumours of political trouble e.g. during elections or between different ethnic groups (tribes); wild life destroyed by poachers; game reserves not respected by local people; poor roads and transport; badly maintained accommodation etc.)	

SENIOR 2: TERM 2 Theme: Fishing, wildlife conservation and tourism in East Africa

TOPIC 20: WILDLIFE CONSERVATION, FORESTS, FISHING AND TOURISM IN NORTH AMERICA: (BRITISH COLUMBIA) 14 PERIODS

Competency: After studying this topic, the learner should understand the relief, climate and natural vegetation of British Columbia, the traditional way of life, need to conserve the wild life and vegetation and uses for tourism.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know the location, relief features and main towns of British Columbia (k) b. know the main natural resources of British Columbia (k) c. understand the climate of British Columbia and its effect on vegetation (u) d. understand the importance of forest vegetation (u) e. understand the traditional way of life of the Native Americans in this area and the effects of European occupation f. understand the importance of fishing in British Columbia g. appreciate the need to conserve the natural environment (v/a) h. understand the dangers of deforestation, over-fishing and pollution of water bodies (u) i. draw a map to locate main features of British Columbia (s) j. draw a climate graph and use this to describe climate of British Columbia (s) k. draw diagrams and flow diagrams to show stages in logging (s) l. draw diagrams to show fishing techniques (s) m. recognise features of British Columbia on photographs (s) n. appreciate the need to preserve the natural environment (v/a, gs) o. appreciate the dangers of over-use of natural resources: deforestation and over-fishing (v/a, gs)	**Location, climate and vegetation** • Use wall map or BB map and atlas or Internet, and elicit from learners the location of British Columbia. • If nobody knows, show learners location and explain that it is in Canada and called British Columbia because Canada used to be ruled by British. • Learners describe relief from maps. • Learners use previous knowledge of climatic regions and position and relief of British Columbia to describe climate (temperate west coast: warm summers, cold winters, heavy rain due to nearness to coast and winds from sea; very cold in mountains). • Use photographs and aerial imagery to show areas in British Columbia and learners describe natural vegetation (forests especially coniferous forests). • Learners use Internet to find photographs of natural vegetation in British Columbia. • Use photographs to describe nature of forests and learners compare this with tropical forest of East Africa (coniferous trees, needles not leaves, few types of trees, little undergrowth, soft wood). **Traditional way of life** • Explain that before Europeans came, the area was occupied by native American tribes (wrongly called 'Indians') who lived mainly by fishing in fast flowing rivers and hunting in forests. • Learners investigate what happened when European settlers arrived (This way of life was threatened or destroyed by Europeans using forests and rivers). • Ask learners to suggest the importance of conserving forests in British Columbia.	• Observe learners use of maps and graphs to explain the key features of British Columbia, including climate, making links between these. • Observe as learners use their work to describe the traditional way of life in British Columbia and discuss how and why this has been changed. • Ask learners to explore: Are there areas of East Africa where a traditional way of life has been changed in similar ways? Describe these and compare with British Columbia. Observe their responses in order to evaluate how well they have understood the connections between lifestyles and the environment. • Evaluate case studies to see how well learners have understood the problems and solutions of deforestation. Use learners' summaries to evaluate how well they have understood the conflict between development and conservation or preservation of the environment. • Observe learners' reports and reasons for their answers.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Use of forests: logging • Explain that Europeans developed large-scale logging • Use photographs for learners to describe stages in logging or 'lumbering' and movement of timber. • Learners use Internet to look up use of forests in British Columbia. • Learners suggest difficulties of logging, including fire problems and need for fire guards. • Learners suggest dangers of taking too many trees: deforestation and effects on climate, wildlife and soils. • Learners suggest possible solutions: limiting number of trees cut, replanting. • Learners use the Internet to work in groups and research a case study of sustainable forestry practice in British Columbia. They list and compare their sources. • Groups present their case studies to the class. **Fishing** • Use photographs or pictures to show main types of fish. • Use pictures for learners to describe methods of fishing. • Use diagram to show life cycle of salmon and journey up and down rivers. • Learners brainstorm possible dangers to fishing industry, partly using knowledge from study of East Africa: over-fishing, catching young fish, using small-holed nets etc. • Explain blocking of travel of fish down and up rivers by building hydro-electric dams and need to provide 'steps' for fish to climb up by jumping. • Discuss conflict between need for hydro-electricity, partly for mining, and needs of fishing. • Ask how mining and industries may pollute rivers and the sea. • Explain other ways of conserving fish resources in British Columbia.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Conflict between development and preservation of natural environment • Ask learners to use British Columbia and East Africa to explain the conflict between development and conservation or preservation of the environment. • Individually, learners write a summary of this conflict. **Tourism** • Ask learners to explain why British Columbia might be a good area for tourism. What would be the tourist attractions? How does development of logging, hydro-electric power, industries and mining conflict with the needs of tourism. • Learners use internet to find out about tourism in British Columbia. • Ask learners to compare this with East Africa. • Learners suggest how these conflicts can be overcome. • Working in pairs, learners are given an exercise to compare tourism in British Columbia and East Africa. They write a report to reflect their ideas, giving reasons for them.	

POPULATION, URBANISATION AND TRADE IN EAST AFRICA AND NORTH AMERICA (New York)
TOPICS 21 – 23: 36 PERIODS

SENIOR 2: TERM 3

Theme: Population, Urbanisation and Trade in East Africa and North America

TOPIC 21: POPULATION AND URBANISATION IN EAST AFRICA — 8 PERIODS

Competency: After studying this topic, the learner should understand and appreciate factors influencing population growth and distribution in East Africa and the effects this has, including effects on environment and urbanization.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. understand the concepts related to population (u)
b. know the main areas of low and high density of population in East Africa (k)
c. know the location of the main urban centres of East Africa (k)
d. use maps, statistics, graphs and diagrams to analyse population (s)
e. understand the demographic transition model and how this relates to the historical growth and population structures of East Africa
f. understand the relationship between population, resources and the provision of services (u)
g. understand the factors which have led to rapid population increase in Uganda and the rest of East Africa (u)
	Population growth
	• Revision: ask learners revision questions on reasons for population growth: birth and death rates and rate of natural increase, check understanding of terms: population, population density, population distribution, under population, and overpopulation.
	Distribution and density of population
	• Use wall map, BB map or atlas or internet to show distribution of population in East Africa
	• Learners list a. areas of high population density; b. moderate population density; c. low population density. They analyse statistics of population for East Africa and draw a map to show areas of high, moderate and low population density in East Africa.
	• Learners suggest reasons for areas of high and low density.
	• Learners work in pairs to use maps and diagrams to select one area of East Africa with a high density of population and one area of low density of population. They should explain the reasons for the density of each and describe the results of the high or low density. Pairs feed back to whole class.
	• With help of learners' answers from last task, learners work in groups to explain factors affecting density of population in East Africa. Put following words on BB as prompts:
	  • climate, especially rainfall
	  • soils
	  • relief
	  • diseases
	  • type of farming
	  • resources including minerals
	  • urbanisation
		• Observe learners using maps and diagrams to make notes on high and low population. Intervene if there is any misunderstanding, so that whole-class feedback is informative and relevant.
		• Learners describe the problems of rapid urban growth and suggest ways as to how these can be overcome.
		Monitor in group stage and contribute if they need prompting, and to clear up any misunderstanding. In whole-class feedback, note if learners ask relevant question or extend topic.
		• Ask learners to write an essay on whether Uganda's population is growing too rapidly and, if so, what measures should be taken to reduce the rate of growth. Observe what they have produced, exploring how balanced their essay is.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

h. understand the relationship between a rapidly growing population and urbanisation (u)
i. understand Kampala city as an example of rapid urbanisation (u)
j. understand the concept of urbanisation, the factors influencing urbanisation, and the functions of urban areas (u)
k. understand the advantages, disadvantages and problems resulting from urbanisation (u)
l. form opinions on the implications of urbanisation for development. (a)
m. use statistics and photographs to illustrate urbanisation and its problems (s)
n. understand the methods which can be used to control the rate of population growth (u)
o. form opinions on the need for, and use of population control methods (a)
p. appreciate the social and cultural problems of slowing down population growth (a, gs)
	• Groups nominate a speaker and speakers feed their group's ideas to the whole class.
	• In groups, learners discuss problems of high densities in rural areas:
	  • shortage of land
	  • land fragmentation
	  • lack of fallow period
	  • overuse of soil
	  • soil erosion
	  • low yields of crops
	  • poor nutrition
	  • food shortages
	Groups nominate a different speaker and speakers feed their group's ideas to the whole class.
	Rural-urban drift and urbanization
	• Learners use internet to find population of some urban areas e.g. Kampala, Nairobi in 1960, 1980, 2000, 2010, 2015
	• Learners discuss reasons for rural-urban drift: pull factors and push factors
	• Explain structures of urban areas: residential, commercial, industrial; high income, low income
	• Learners relate this structure to any urban area they know
	• Learners discuss problems related to rapid growth of urban areas:
	  • unemployment
	  • lack of adequate housing and slums
	  • inadequate infrastructure and social services
	  • transport problems
	  • pollution
	  • diseases
	  • inequality: division between very rich and very poor
	  • corruption
	  • high crime rate
	Problems of rapid population growth
	• Learners hold debate or discussion on whether the rate of population growth in Uganda needs to be reduced and if so how this can be done. Include cultural and religious issues.	

SENIOR 2: TERM 3

Theme: Population, Urbanisation and Trade in East Africa and North America

TOPIC 22: URBANISATION IN NORTH AMERICA: NEW YORK — 12 PERIODS

Competency: After studying this topic, the learner should know the situation and site of New York, and he/she should understand why New York became a big city and the characteristics and problems of New York as an urban area.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. know where New York is situated (k)
b. know the names of some areas in and around New York (k)
c. understand the characteristics of New York as a city (u)
d. understand New York City as an example of rapid urbanisation (u)
e. understand the advantages of the site and situation of New York in relation to early European settlement of North America (u)
f. understand the population structure of New York and use statistics and graphs to analyse it (u) (s)
g. understand the concept of urbanization, the factors influencing urbanization, and the functions of urban areas (u)
h. know the layout and divisions of New York (k)
i. understand the importance of New York in USA (u)
j. make a comparison between New York and Kampala (u)
k. appreciate the attraction of New York to young people in America and its influence on young people in East Africa (a, gs)
l. understand the advantages, disadvantages and problems resulting from urbanisation (u)
m. use statistics and graphs to show the rapid urban development in New York
n. use statistics and photographs to illustrate urbanization and its problems (s)
o. understand Kampala city as an example of rapid urbanisation (u)
p. form opinions on the implications of urbanisation for development (a)
	Knowledge of New York
	• Ask learners what they know about New York. Discuss answers and ask why New York is so famous.
	• Learners collaborate to find a range of aerial imagery, maps and photographs, from online sources, to describe what New York is like and its characteristics. They also discuss how reliable the information is.
	Position and site
	• Use a wall map, BB map and atlas to show the position of New York along the N.E coast of North America and the site of New York.
	• Ask learners to describe the position of New York and the site of New York. Learners create their own maps and annotate them to show how its location enabled rapid development.
	• Learners suggest why New York became an important port. Explain that the first Europeans settled along the north east coast opposite Britain and Europe, where they came from. (Ask why it is called New York)
	• Explain the importance of New York as a port
	• Use above activities to help learners explain factors which led to the growth of New York:
	  • Deep water port
	  • Sheltered harbour
	  • An area of early European settlement
	  • Opposite Britain and Europe for main trade
	  • Port ice free all year
	  • At end of Hudson-Mohawk gap: a lowland route through mountains to interior
	  • Good farming land inland
	  • Solid rocks for buildings
		• Drawing on what they have learnt about urbanisation, learners should produce a short news report. Observe their report to identify accurate details of urbanisation.
		• Learners use their maps to explain the features that encouraged development. In conversation, ask learners to explain what they have learnt.
		Observe learners' graphs for accuracy and understanding.
		• Observe as learners use their maps and graphs to compare and contrast New York and Kampala, describing similarities and differences.
		• Observe learners as they explain why they have chosen the features that they have for their cities of the future.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

	Growth of New York
	• Present statistics of the growth of New York and learners draw line or bar graphs to show this.
	• Learners analyse and explain the growth of New York
	Functions of New York
	• Ask learners to list all the things people in Kampala do. These are called the functions of the city.
	• Use answers to list functions of New York City. Elicit as much as possible from learners before explaining.
	  • trade with overseas and interior
	  • government and administration (but not capital: that is Washington)
	  • international government centre (United Nations)
	  • services: health, education, entertainment, sport, banking and finance, religion
	  • transport centre
	  • industries
	  • tourism
	Layout of New York
	• Explain that each city has different areas with different kinds of buildings and different functions.
	• Learners mention different areas of Kampala (or another city they know) mentioning the kind of buildings, what they are used for, who lives in them etc.
	• Use photographs of different areas of New York or learners find these on internet.
	• Learners describe what the areas look like and, using ideas from Kampala or elsewhere, suggest what they might be used for or who might live in them. Use this to classify areas of New York and compare with Kampala.
	  • Central Business District (CBD): trade, finance, administration and entertainment (Nakasero, Old Kampala)
	  • shopping and/or entertainment areas
	  • (Bugolobi centre)
	  • industrial areas (Industrial area)
	  • markets
	  • service areas: hospitals, educational institutions (Mulago, Makerere)	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• high-class residential (where rich live) (Muyenga, Kololo) • middle-class residential (Ntinda) • poor residential (Ndeeba) • slums (Katwe) **Problems of New York** In groups, learners investigate recent and reliable sources to collect data about poverty levels in New York. They use this to suggest reasons for the high levels of poverty, making notes to feed back to class. These should include: • revision of problems of cities in East Africa in topic 18. Explain that New York has similar problems although some are less severe: • transport problems: due to being mainly on an island, but good train and underground trains • inadequate infrastructure and social services: better but still a problem • pollution • diseases • inequality: division between very rich and very poor: • unemployment • lack of adequate housing and slums • corruption • high crime rate and drug addiction • Groups share findings with whole class. **Solving the problems of big cities** • Ask learners to discuss, using examples of Kampala or other East African city, and New York, all the above problems and suggest possible solutions. • Learners work in groups to create a model city of the future and explain its features.	

SENIOR 2: TERM 3

Theme: Population, Urbanisation and Trade in East Africa and North America

TOPIC 23: TRANSPORT AND COMMUNICATION IN EAST AFRICA — 8 PERIODS

Competency: After studying this topic, the learner should understand the major types of transport and communication in East Africa and factors influencing their development and their role in development.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know the difference between transport and communication (k) b. use photographs to identify the different types/modes of transport (s) c. use maps to show the major transport routes (s) d. understand the factors which influence the distribution of the major transport routes in Uganda and the rest of East Africa (u) e. understand the role of the different types of transport in development (u) f. understand the advantages and disadvantages of each form of communication (u) g. understand the consequences of the revolution in communication caused by digital communication: mobile phones, computers and Internet, social media (u) h. form opinions on the importance of transport in national and regional development (a)	**Types of transport** • Ask learners how people moved and transported goods traditionally • Ask what sort of people still use human or animal means of transport and why? • Learners list the problems caused to transport by relief and drainage features in East Africa. • Learners construct a table to show the advantages and disadvantages of different types of transport (human, animal, road, railway, water, air) in terms of speed, cost, and ability to carry goods including bulk goods. • Discuss this table to compare all forms of transport. • Learners draw a paper or digital map showing the main railways, important road routes and shipping routes in East Africa. They draw and use maps to investigate proposed routes for exporting oil from east Africa and give their views. • Explain and discuss how the development of transport is affected by economic development and production of goods, population, capital and markets. • Explain and discuss how development of transport e.g. roads and railways, affects economic development. • Explain the transport of oil by pipeline and learners suggest the advantages and disadvantages of different routes to transport oil from Uganda. • Learners work in pairs and talk about the different transport types in their local area and how they have been beneficial to the local community. They identify how transport and communication might be improved. • Pairs feed their ideas back to the class and the discussion broadens.	• Give learners a list of different types of goods to be transported to different places. Observe how well learners suggest and justify the best means of transport for a particular journey. • Learners use evidence to explain some factors which influence the distribution of transport routes in Uganda and the rest of East Africa • Learners discuss. Monitor discussion and help steer learners if necessary to ensure they achieve the outcome. • Observe pairs and ask questions during feedback to bring out any points not covered. Note how relevant their ideas are. • Ask learners to compare ways of communicating with people in other areas or places with the ways your parents used to communicate. Observe discussions about the advantages and disadvantages of each.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Types of communication • Ask learners the main traditional forms of communication, to what extent these are still used and what advantages they have • Ask learners what means they use to communicate with people close to them and far away. They draw a table choosing their own criteria to compare and contrast. • Explain that digital communication by mobile phone and Internet has been developed very recently and before that the main forms of communication were letters, post office, fixed line telephones and telegraph. • Learners describe the advantages of digital communication by mobile phone and internet, including social media. • Explain some of the disadvantages and dangers of communication by mobile phone, internet and social media.	

SENIOR 2: TERM 3

Theme: Population, Urbanisation and Trade in East Africa and North America

TOPIC 24: TRADE WITHIN AND OUTSIDE EAST AFRICA — 8 PERIODS

Competency: After studying this topic, the learner should understand the types of trade carried out within East Africa and between East Africa and Africa and the rest of the world and the importance and difficulties of each type of trade.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. study a local market/shopping centre to identify the patterns of trade (s)
b. know the main exports of Uganda and their contributions to intraregional and international trade (u)
c. know the main exports and imports of East African countries (k)
d. know the destination and origins of the main exports and imports (k)
e. understand the importance of trade in the development of a country (u)
f. know the types of trade including barter, visible trade, invisible trade (k)
g. understand the meaning and importance of a favourable balance of trade and difficulties of an unfavourable balance of trade (u)
h. understand historical problems with trade in East Africa: reliance on exporting raw materials and importing manufactured goods (u)
i. form opinions about ways of overcoming this problem (a)
j. understand why there is limited trade between East African countries (u)
k. understand ways of encouraging trade between East African countries and with other African countries (u)
l. use flow charts, statistics and maps to show trade patterns (s)
m. appreciate the advantages of processing to add value to exports (a, gs)
n. appreciate the advantages of developing import substitution industries (a, gs)
o. appreciate the need for an economic system which helps to distribute the resources in an equitable way (a)
	Types of trade in East Africa
	• In groups, learners go and study a local market, using questionnaires and other methods. They find out what is sold, where it comes from, who buys things, how the prices are set, how the goods in the market change in different seasons and the problems the traders face.
	• Ask learners to individually think of their home area or any area of Uganda they know well. List the main goods sold from that area. Learners find answers to the following questions:
	  • Which are sold within Uganda and which are exported?
	  • Which are the main goods people buy?
	  • Which come from Uganda and which from overseas?
	  • Do you think the value of the goods from the area which are exported overseas is more or less than the value of goods imported?
	  • If more goods are imported than exported what difficulty may this cause?
	• Use a table or learners find out on the Internet, statistics of the imports and exports of Uganda or any other country of East Africa.
	• Learners find answers to the following questions:
	  • Are most goods exported raw materials or manufactured goods?
	  • What about most goods imported?
	  • What kind of goods are usually more expensive?
	  • How could we increase the value of the goods we export? Give examples of what we could do.
		• Observe what learners produce to explain the pattern of traded goods as a result of their fieldwork investigation.
		• In conversation, ask learners to suggest ways to get more benefits from our trade outside Uganda.
		• Learners identify some benefits of trade within Uganda and give examples.
		• Learners identify some of the advantages and disadvantages of making free trade agreements with countries outside Africa. In conversation, assess their reasons for their answers.
		Learners produce a report which explains the relative successes of goods sold within Uganda – that have not been exported. In conversation, ask learners to explain what they think the challenges of regarding this kind of trade.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• Explain that if we import more than we export we will not be able to pay for all the imports and we will have a negative or unfavourable balance of payments i.e. we will owe outside people money and we cannot do this for too long. Also, we can only buy goods from overseas with foreign money or foreign exchange and we can only get foreign exchange by exporting goods or services. Ask how we get such foreign money. • Learners discuss this in groups and then have whole-class feedback. • Explain that East Africa mainly exports raw materials and imports manufactured goods. This is a product of history. Ask learners to suggest how the history of East Africa led to this. In feedback, explain that our colonial power wanted to buy raw materials from us for their industries and sell us manufactured goods which they produced. But raw materials are usually cheaper than manufactured goods, so we lose. • As a class, learners discuss the advantages of processing our raw materials to get more money e.g. export processed coffee in tins, cotton made into thread or cloth, milk processed into powdered milk in tins, or fruit made into juice etc. • Explain that people can also make money without exporting, by selling goods to people in Uganda. Learners give examples of goods sold within East Africa, and agricultural goods which can be processed for local sale. **Trade within East Africa** • Use statistics on trade between East African countries or learners find these from Internet. • Ask learners what happens if they take goods across the border to Kenya or Tanzania or export goods to other African countries? What do they have to pay? (They have to pay customs duty to the government in the other country.) • Ask learners to suggest why there is limited trade between East African countries. • Explain that one way to increase trade within East Africa or Africa is to abolish customs duties, but then governments get less money.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Trade Agreements • Ask what happens when you move goods from one country to another (payment of customs duty). Does this happen within East Africa? • Explain that some groups of countries sign agreements to allow free trade, without paying customs duties. The East African Community is doing this between East African countries and is also signing agreements with other groups such as the Southern African Development Community (SADC) for free trade over large areas of Africa. • Explain that some overseas groups also want to sign agreements with us e.g. European Union or USA. But sometimes they want to allow our goods into their area duty free and we allow their goods into East Africa duty free. • Ask learners to think of the problems if we allow their manufactured goods duty free. How will we develop our own manufacturing industries? **Invisible exports: labour and tourism** • Ask learners why some people from Uganda like to go and work overseas? • Ask learners how they benefit from this and how the country benefits from it. • Explain that when they send foreign money back to Uganda this is called an invisible export. • Explain that there are other ways we can make overseas money without exporting anything e.g. tourism. Ask learners how we get overseas money from tourists - Tourists come and spend their money in East Africa and we do not export anything. These are also called invisible exports.	

FURTHER USES OF MAPS; INTRODUCTION TO THE REST OF AFRICA
TOPICS 25 – 28: 36 PERIODS

SENIOR 3: TERM 1 **Theme: Further use of maps; introduction to the rest of Africa**

TOPIC 25: FURTHER SKILLS IN MAP READING — 12 PERIODS

Competency: After studying this topic, the learner should be able to use large scale maps or 'survey' maps to find out and describe more about areas.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. understand what a contour is (u) b. use contours to describe the relief of an area (s) c. recognise physical and other features on conventional survey maps and photographs (s) d. use contours to show physical features on maps and draw cross-sections from simple contour maps (s) e. understand how to use a survey map to find out about the geography of an area (u) f. use survey maps to describe the relief, drainage, vegetation, farming, settlements, transport and other human activities of an area (s) g. use a sketch map to show the areas on a map (s) h. appreciate the usefulness of survey maps in studying Geography (a, gs)	Using contours • Explain that a contour is a line along which all places are the same height • Learners go outside in an area with different kinds of slopes. • Ask learners to line up along a contour and another group to line up along a contour above or below the first one to show what a contour is • Choose an area of steep slopes and an area of gentler slopes. Ask learners to stand on one contour and others to stand on contours above and below. Explain that on a steep slope contours are close together and a gentle slope far apart. • Explain how contours are numbered. • Use a place with a small valley, hill and spur. Or use a sand tray to show these. Learners line up along contours, or mark on sand tray, contours around the hill, valley and spur to show the shape of these features on contour map. • Use a very simple contour map showing steep and gentle slopes, valley, hill, spur, flat land etc. with questions to help learners to recognise features.	• In conversation, ask learners to use their maps to explain what contours show and explain what kind of shapes different contour patterns mean in the landscape. • Ask learners to describe physical features and human features seen on a survey map and relate the two. Observe how accurate their descriptions are of these features. • Provide learners with exercises to draw cross sections of physical features. They should mark features on them and relate these to height. Observe the accuracy of their work. • Observe learners use of maps to explain features in the landscape and patterns of development.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Describing an area from a survey map • Use survey maps for learners to describe relief, physical features, drainage, vegetation, farming, settlement, transport and other human activities in an area. Ask questions to relate human features to physical features and to each other. • To help with this, learners practise using sketch maps to show the areas on a map and use maps in local area fieldwork. • Learners describe the economic development of an area, using a survey map, including problems facing development and prospects for development. Use maps to explain other aspects of geography throughout the topics. **Using a cross section** • Explain how to draw a cross section from a survey map • Learners practise drawing cross sections • Learners mark human features along cross section • Explain with examples how cross sections can be used to describe areas and relate features of an area to height • Learners practise drawing cross sections and showing physical and human features on these. • Compare hand-drawn landscape profiles with those that can be drawn digitally e.g. using Google Earth	

SENIOR 3: TERM 1 Theme: Further use of maps; introduction to the rest of Africa

TOPIC 26: LOCATION AND SIZE OF AFRICA 2 PERIODS

Competency: After studying this topic, the learner should know the size of Africa compared with other continents, its position in the world and the size and position of East Africa within Africa.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know the position of Africa in the world (k) b. know the size of Africa compared to other continents (k) c. know the position and size of East Africa within Africa (k) d. understand that Africa occupies a unique position as the most tropical of continents (u) e. understand the characteristics of important kinds of physical features in Africa and East Africa, including mountain ranges, volcanoes, plateaus, basins and rift valleys (u)	**Location and size** • Use globes, a wall map and atlas maps of the world. Learners describe the position of Africa compared to other continents and to the equator and tropics. Show learners different map projections in 2D maps and notice the relative size appearance of Africa. Compare with the size shown on a globe. • Use a table to show the areas of each continent and challenge learners to construct a simple bar graph or pie chart to represent these. They should compare the size of Africa with other continents. • *OR learners make a table of the areas of continents from the Internet and compare the sizes with Africa.* • Use a wall map and atlas maps of Africa or Internet maps for learners to describe the position of East Africa within Africa and the comparative size of East Africa. • Draw a sketch map of Africa, showing major features.	• In conversation, ask learners to explain where the continent of Africa is in the world with reference to world geometry and identify some of its characteristics associated with this location. • In conversation, ask learners to explain why Africa appears to have a different relative size on some 2D maps. • Ask learners to write an essay about what makes Africa different from other continents. Assess to what extent this essay reflects they key issues learnt from this topic.

SENIOR 3: TERM 1 Theme: Further use of maps; introduction to the rest of Africa

TOPIC 27: THE RELIEF REGIONS AND DRAINAGE OF AFRICA 8 PERIODS

Competency: After studying this topic, the learner should know the relief regions of Africa, the major landforms and drainage and understand how they were formed and the effects of these on development.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know the names and positions of the major relief regions of Africa (k) b. recognise physical features from photographs (s) c. draw diagrams to show the formation of important physical features (s) d. understand the characteristics of important kinds of physical features in Africa and East Africa, including mountain ranges, volcanoes, plateaus, basins and rift valleys (u) e. understand the main concepts of plate tectonics and how this has led to the formation of the main physical features of Africa and East Africa (u) f. draw a sketch map to show the major relief regions, rivers and lakes (s) g. understand how different landforms affect the lives of people living in these communities (u) h. appreciate that many areas contain very old rocks not very good for soil formation but rich in minerals (a) i. realise that volcanic areas are the most fertile in Africa (u) j. understand the effects of the landforms on development, including agriculture and mining (u) k. locate the main rivers and lakes of Africa (s) l. understand the importance of rivers and lakes for development (u) m. appreciate that rivers and lakes can be useful but can as also be spoilt by pollution (a, gs) n. understand how their own lives and the lives of their communities are affected by physical features, including natural hazards (u) o. understand through case studies how the physical features affect the lives of people in selected areas of East Africa (u) p. study through field work any of the above physical features in the local area (s)	**Relief regions** • Learners work in groups to research and create their own 2D or 3D maps, adding features as they learn about them. • Use a wall map and atlas map or Internet map showing relief of Africa and images, including aerial images. Learners locate and describe the position of the main mountain areas of Africa. • Ask which kind of relief is most important in other areas: plateaus or coastal plains • Explain that, apart from high mountains, most of Africa contains plateaus with small areas of coastal plains. **Formation of landforms** • Revise the formation of volcanoes and block mountains. • Explain that the mountains of Africa are either old or new volcanic mountains (Ethiopian highlands, Cameroon, Drakensburg and volcanoes of East Africa), block mountains (Rwenzoris) or folded mountains (Atlas) • Look up Drakensburg and Atlas Mountains on Internet and make notes about their origins • Explain that Drakensburg are very ancient volcanic areas where volcanic activity has often occurred under the surface, not erupting on the surface like Elgon or Kilimanjaro. • Use modelling techniques and diagrams to explain folded mountains: Atlas Mountains. • Explain that most of the rest of Africa consists of very ancient rocks forming plateaus. Ask learners if rocks on such plateaus are likely to form good soils (old hard rocks not easily broken down or weathered). • Explain that old rocks do contain many minerals e.g. copper, gold, uranium so there are many mining areas in Africa	• Observe as learners use their maps to discuss the advantages of Africa's landforms and relief features for the development of Africa and make connections. (Answers should mention areas of good volcanic soils with high population densities; areas of minerals e.g. copper, gold, uranium; fertile sedimentary soils and oil deposits; mountains good for tourism) • Learners use evidence from their case studies to present and identify some of the advantages and problems caused by landforms and how this has affected communities. Observe the extent to which learners are able to describe key advantages and problems. • Observe as learners discuss findings from their fieldwork and interpret their local area.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
q. understand how water resources are used and controlled (u)	• Explain that on some coastal plains and in river valleys, sedimentary rocks have been deposited e.g. Niger delta. These form fertile soils and also in some areas contain oil deposits. • Learners develop their maps, devising their own key to show regions and features they have investigated and learnt about. **Drainage** • Use an atlas, wall map or Internet map to identify main rivers and lakes of Africa. Learners add these features to their own maps. • Ask learners to suggest the ways in which these rivers and lakes benefit the people of Africa. • Learners suggest the problems the people of Africa face in using the rivers and lakes. • Learners create a case study of an area where agriculture or mining has thrived and explain how landforms have influenced people's way of life there. • Learners investigate the local area through fieldwork and map the key landforms and development, making connections between the two.	

SENIOR 3: TERM 1 Theme: Further use of maps; introduction to the rest of Africa

TOPIC 28: THE CLIMATE AND VEGETATION OF AFRICA 14 PERIODS

Competency: After studying this topic, the learner should understand the distribution of climates in Africa and the reasons for them, and the effect of these climates on human development.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. understand the relationship between the Earth and the Sun and how this affects temperatures and seasons (u) b. draw diagrams to show the relationship between the Earth and the Sun's rays and the causes of temperature variations and use these to show why the Earth can be divided into tropical, temperate and polar regions (s) c. understand the characteristics of the climates of Africa and factors influencing them (u) d. appreciate that people's lifestyles are influenced by the type of weather and climate (a) e. understand through case studies how selected climates and types of vegetation affect the way of life of the people in those areas (u) f. appreciate that the differences in the ways of life and cultures of people are partly a product of the different climates (a) g. draw a map showing the climates and vegetation of East Africa h. draw climate graphs of local and other areas and describe climates using these i. appreciate that the traditional way of life and farming of all people of Africa is strongly influenced by the climates (a, gs) j. appreciate that modern technologies and urbanisation have made people less dependent on the climate. (a, gs) k. understand through field work the characteristics of the vegetation and how vegetation is affected by the climates (u)	**Factors affecting the climates of Africa** • Revise the seasons and apparent movement of the sun through questioning. Ask learners when the northern and southern hemispheres are tilted towards the sun. • Explain that this affects the angle of the sun at midday. In March and September, the sun is overhead at noon on the equator. From March to September it is overhead at noon north of the equator, between equator and Tropic of Cancer. From September to March it is overhead south of the equator, between equator and Tropic of Capricorn. • Revise: ask what will happen to air when the sun is overhead and what this will cause? (Air will rise, causing convectional rain) • Explain that this rising air causes winds to blow from north and south towards the rising air. • Show diagram and map of the winds this causes: north east trades and south east trades. Explain that where these meet is the Inter-tropical convergence zone (ITCZ): an area of rising air and heavy rain. • Learners look up Inter-tropical Convergence Zone on Internet and find out about its position, seasonal movements and effects. • Explain: As the sun is overhead north and south of equator the ITCZ follows the overhead sun: north from March to September, south from September to March and on equator March and September. • Explain that rain in Africa mainly depends on ITCZ: heavy rain when ITCZ passes overhead and dry when outside ITCZ. Learners describe how this affects different climates: equatorial and savannah • Explain that places outside the tropics have different kinds of climate not affected by ITCZ.	• Observe as learners use maps and diagrams to explain the distribution of climate patterns across the continent of Africa, with explanations for difference and making connections with factors such as latitude, altitude, and time of year. • Observe as learners compare two of the climatic regions of Africa, mentioning climate, causes of the climate, and the effect of the climates on the way of life. • In conversation, ask learners to reflect and suggest whether people in Africa today are less affected by the climates than they were traditionally. • Ask learners to use their work to explain some of the current and future challenges people face from climate, and give examples (including the effect of climate change), Observe their work to check for understanding.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

l. form opinions about the dangers of the overuse of the natural vegetation (a)
m. appreciate the need to love and care for their local area, community and country by replanting the vegetation and carry this out (a/ s)
n. understand the main characteristics of the climates and how each affects the vegetation of the area (u)
o. understand how the traditional farming and way of life was influenced by the climate (u)
	The climates of Africa
	• Give climate statistics for learners to draw climate graphs for each kind of climate in Africa: equatorial, savannah, desert, Mediterranean.
	• Learners suggest which climates are in the ITCZ twice a year (equatorial), once a year (savannah) and not at all (desert and Mediterranean).
	• Learners draw sketch map showing these climates in Africa
	• Using the graphs drawn and facts about ICTZ, learners explain the main climates:
	  • *equatorial*: within ITCZ twice a year so two very rainy seasons Feb- May and August – November. Some rain all year.
	  • *savannah*: within ITCZ once a year: northern hemisphere rainy season May – August; dry season September – April;
	  Southern hemisphere rainy season November – January; dry season February – October.
	  • *desert*: never really in ITCZ: dry all the year
	  • *Mediterranean*: never within ITCZ. Affected by other winds. Rain in winter, dry in summer (Northern hemisphere: rain October – March; dry: April – September;
	  Southern hemisphere: rain April – September; dry October – March)
	Note: Mountain climates in high mountain areas: much colder due to height and usually wet due to relief rain
	Learners look up on the Internet each of the above climates in Africa and find the positions and climates of each.
	• Learners investigate the effects of climate on livelihoods through local scale case studies, comparing these to identify some key positive and negative factors.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Effects of climate on way of life • Using ideas learnt in East Africa, learners suggest types of vegetation, farming, crops grown and animals kept in each of above climates (except Mediterranean – teacher to explain) • Equatorial: tropical rain forest; shifting cultivation or smallholdings: bananas, yams, sweet potatoes, dairy cattle, coffee, cocoa • savannah: grassland and scattered trees; shifting cultivation or smallholdings: grain crops – maize, sorghum, millet, groundnuts, cattle, goats, cotton and tobacco. Traditional nomadic farming in drier areas • desert: vegetation only in oases; no crops, nomadic farming with camels, sheep, goats • Mediterranean: short shrubs, small trees; wheat, maize, olives, grapes • Show photographs of each of the climatic regions or use the Internet to find photographs. Learners to decide, with reasons, which climatic region is being shown.	

INTRODUCTION TO THE RHINELANDS AND CHINA; AGRICULTURE IN AFRICA TOPICS 29 – 31: 36 PERIODS

SENIOR 3: TERM 2

Theme: Introduction to the Rhine lands and China; agriculture in Africa

TOPIC 29: EUROPE: THE RHINELANDS: LOCATION, RELIEF REGIONS, DRAINAGE AND CLIMATE

8 PERIODS

Competency: After studying this topic, the learner should know the location of the Rhinelands within Europe and its relief regions, drainage and climate.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know why there is an area called the Rhinelands (k) b. know the location of the Rhinelands and the countries within it (k) c. locate places on an atlas map using latitude and longitude and describe the places from information on the map (s) d. know the names of the main areas of relief and rivers (k) e. understand how the river Rhine links these areas together (u) f. use and interpret symbols and identify features on a map using a key (s) g. use maps to show the major transport routes (s) h. understand the role of the different types of transport in development (u) i. draw climate graphs of local and other areas and describe climates using these (s) j. draw maps to show the areas of the case studies and graphs to illustrate their climates (s) k. appreciate why it is useful for Ugandans to study the Rhinelands (a, gs) l. appreciate that people's lifestyles are influenced by the type of weather and climate (a)	**Why study the Rhinelands?** • Revise ideas in topic 11 on why it is useful to study areas outside East Africa and Africa • Introduce the area of topic using an atlas and maps and ask learners to offer ideas as to the meaning of the term Rhinelands: the lands along the river Rhine. • Ask learners which countries colonized Africa and recap using longitude and latitude to reference their location. • Explain that the Rhinelands are an important part of Western Europe which has had an important influence on Africa, as the main European countries which colonized Africa came from Western Europe: Britain, France, Netherlands, Germany, Belgium, Italy, Spain and Portugal. Three of these are part of the Rhinelands. Also, the Rhinelands are typical of old established industrial countries and have important trading links with East Africa. Uganda can also learn lessons from their utilisation of resources.	• Observe as learners use their maps to describe a journey down the Rhine valley from Switzerland to Netherlands, mentioning the relief of the area on the way, the countries, the languages and the main towns. • Learners use their work to explain similarities and difference between the climates of the places studied and give some ideas as to why this might be.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Location, relief and drainage of Rhinelands • Use wall map and/or atlas maps showing the Rhinelands within Europe. • Learners use Internet to look up Rhine River and find out which countries it flows through. • Learners locate the river Rhine, then describe the position of the Rhine within Europe and name the countries along the Rhine. (Switzerland, France, Germany, Netherlands) • Learners describe the relief of the area where the Rhine originates and along either side of the Rhine to the sea; Mountains in Switzerland (Alps); highlands on either side the valley in Germany (Rift valley); lowlands towards mouth especially in Netherlands (the Rhine delta) • Learners look for names of main rivers (Rhine, Ruhr, Ems) m. Ask learners to suggest why the Rhine valley is an important route for trade (Rhine is navigable: ships can travel all the way to near Switzerland. The valley provides an easy route for roads and railways) n. Ask learners to draw their own sketch map of the Rhinelands area, using a key. **Climate of Rhinelands** • Use two climate graphs of Rhinelands areas: one on upper Rhine, one on lower Rhine. Ask learners, as a class to describe the climate of each, mentioning similarities and differences. Describe main differences from climates of East Africa. • (Upper Rhine and lower Rhine: both rain all year, seasonal – summer warm but not hot, winter cold. upper Rhine colder and less wet than lower Rhine. Compared to East Africa: seasonal with winter and summer; cold winters; never very hot; rain all year.)	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	History of Rhinelands • Ask learners: Lake Victoria Basin links together the people of parts of East Africa but have they always been peacefully linked? What divides them? • (No –often warfare between groups in East Africa. Divided by languages and later political boundaries. Now more united in East African Community) • Explain that people on either side of the Rhine speak different languages: German to east and French to west plus Dutch (Netherlands language) at the mouth. The language groups also form different countries: Germany, France and Netherlands. In most of European history two of these groups were enemies and fought many wars including First and Second World Wars between Germany and France. After Second World War Germany, France and Netherlands united to form part of the European Union with other European countries. Compare this with East African Community. • *Learners use the Internet to look up conflicts between Germany and France. (History?)*	

SENIOR 3: TERM 2

Theme: Introduction to the Rhine lands and China; agriculture in Africa

TOPIC 30: INTRODUCTION TO CHINA: LOCATION, SIZE, RELIEF REGIONS, DRAINAGE AND CLIMATE

8 PERIODS

Competency: After studying this topic, the learner should understand the importance of China, its location, size, relief regions, and climate.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. use a world map to locate each country (China) b. locate places on an atlas map, using latitude and longitude and describe the places from information on the map (s) c. use maps, statistics, graphs and diagrams to analyse population (s) d. know the size of China in area and population(k) e. use statistics to compare the population of China with other major countries and East Africa (s) f. understand the importance of China in the world (u) g. understand the differences between the main regions of China (u) h. understand the trade patterns of the selected countries and the factors influencing them (u) i. draw maps to show the areas of the case studies and graphs to illustrate their climates (s) j. recognise physical features from photographs (s) k. know the main regions of China (k) l. appreciate the importance of learning about China (a, gs) m. draw climate graphs of local and other areas and describe climates using these (s)	**Size and location of China** • Use wall map, globe, and atlas to show the position of China and ask learners to describe its position. Build up a description of location through learner responses. • Present a table comparing the size and population of China with other major countries of the world and East Africa: China, India, USA, Russia. Ask questions to compare the population and area of China with the other countries. Initially, challenge learners to work in groups to match a population statistic with the correct country. Learners then research the answers and check their work. Discuss learners' perceptions and any differences in data found on the Internet. **Importance of China** • Ask learners whether China is an important country and, if so, why. Is it important in East Africa? Why? • Explain that China is not the largest country in area, but it is in population: 1.3 billion, the most populous in the world (although India is almost overtaking). • Ask learners what we buy from China and which country we buy the largest amount of goods from – many things of all kinds in our shops come from China, more than any other country. • Ask which country is building the largest amount of infrastructure – that is buildings, roads, railways, dams etc. - in East Africa? Give examples. This is happening in nearly all countries in Africa and many other countries in the world.	• Observe learners use maps and atlases to describe location, using appropriate vocabulary and terminology. • Observe learners explain the population statistics they have compiled with each other and any adjustments they make. • Observe learners as they discuss their answers with each other. How well are they using evidence to support their answers? • Observe as learners use their own maps and graphs to explain the relief and varying climates of China. • Observe as: learners explain their forecast using their maps and charts; explain type of expected weather using climate as a reference point.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Relief and Climatic Regions of China • Use a wall map plus atlas maps or Internet map of China showing relief. • Learners suggest how we can divide China into areas according to relief, i.e. mountains, valleys, plains, plateaus (coastal plain, plateaus, Himalayan mountains). • Show photographs and learners guess which area each comes from or use photographs from the Internet. • Learners work in groups to produce a large sketch map showing the main regions of China, using atlases and digital maps to guide them. • Use map showing annual rainfall. Ask learners to pick out wet areas, drier areas and very dry areas. • Show climate graph of monsoon climate near coast. Ask learners to describe climate. (Wet, hot summers; cooler, dry winters). Which climate of East Africa is similar? (Savannah) • Learners look up monsoon on Internet. • Explain the monsoon briefly. Sketch map on BB showing in-blowing winds in summer, out-blowing winds in winter. Explain that in summer land is hot. What will happen to the air over the land? It will rise, and winds blow in from the sea. In winter air is cold so what will happen to it? It sinks down and blows out towards the sea. This reversal of winds is called the monsoon. • Ask learners which season will be wet, and which will be dry. (Wet summers with in-blowing winds; dry winters with out-blowing winds.) • Explain that the amount of rain depends on distance from the sea. • Summarise Regions: wet coastal plains. drier inland. Very dry in west. Cold in mountains. • Learners collaborate to produce a 'weather forecast' for a given reason, using maps and charts and present it to the rest of the class.	

SENIOR 3: TERM 2

Theme: Introduction to the Rhine lands and China; agriculture in Africa

TOPIC 31: THE DEVELOPMENT OF AGRICULTURE IN AFRICA — 20 PERIODS

Competency: After studying this topic, the learner should understand the development of arable and pastoral farming and factors influencing them in Africa, how they are changing from subsistence to commercial, and how they can be improved.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. understand the main types of agriculture in Uganda and the rest of East Africa and the factors influencing them (u)
b. understand how agriculture in Africa is influenced by the climate (u)
c. understand how the traditional farming and way of life was influenced by the climate (u)
d. appreciate the importance of land and water as a source of food, livelihood and income for families, clans and communities (a)
e. form opinions about the dangers of overuse of land and water resources and the need to conserve these in the local area
f. appreciate that caring for and preserving resources in the local environment, community and country are signs of love for one's country
g. know the main subsistence and commercial crops and main animals kept (k)
h. know the main pastoral farming areas in Africa (k)
i. understand the differences between traditional pastoral farming and modern ranching (u)
j. understand the similarities in traditional agriculture in East Africa and the rest of Africa(u)
k. understand the change from subsistence agriculture to commercial agriculture (u)
	Traditional agriculture in East Africa and Africa
	• Revise by working as a whole class, questioning the traditional methods of agriculture in East Africa, shifting cultivation or bush fallowing, and the reasons it is adapted to the climate and soils.
	• Learners suggest why it was also the main traditional method in other parts of Africa.
	Change to more commercial methods
	• Learners suggest why many farmers in Africa are changing to more commercial methods.
	• Revise two main methods of commercial farming: smallholdings and plantation.
	Smallholding commercial farming in Ghana
	• Learners find a case study of cocoa farming in Ghana on Internet.
	• Explain that many small-scale farmers in Ghana started to grow cocoa as a cash crop as well as continuing to grow some subsistence crops.
	• Learners suggest why smallholders started to grow a cash crop and why they continued to grow some subsistence crops.
	• Support learners to locate areas where cocoa is grown in Ghana and create a map to show this.
	• Using the information below, learners compare cocoa growing in Ghana with coffee growing in southern Uganda. Use photograph to show cocoa growing in Ghana.
	• Explain factors making southern Ghana suitable for cocoa as a cash crop:
	  • suitable climate: heavy rain and hot temperatures throughout year
	  • high relative humidity
	  • deep, fertile soils
	  • flat relief
	  • labour supply from family members
	  • good overseas market for cocoa
	  • transport to ports by road and rail
	  • government organised marketing at first
		• Observe learners' initial understanding through revision discussions.
		• Observe learners as they use information from their case studies to discuss and explain:
		  • whether Uganda or other countries of Africa should encourage smallholdings or large-scale plantation farming
		  • the best ways of improving smallholder farming in Africa
		  • the advantages and disadvantages of ranching over nomadic pastoral farming in modern Africa
		  • whether better to encourage ranching or the commercialisation of nomadic farming
		• In conversation, ask learners to use evidence to give reasons for their responses.
		Evaluate relevance and accuracy of learners' conclusions in pair work. Guide pairs who need help.
		Observe learners' descriptions and how much information they find from the photograph. Prompt if necessary to help learners achieve aim.
		Observe group work and guide groups as necessary.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

l. understand the advantages and disadvantages of smallholdings and plantations (u)
m. understand the importance of agriculture in the economies of African countries (u)
n. understand the main features of nomadic pastoral farming (u)
o. understand problems of nomadic farming adjusting to the modern economy (u)
p. understand the advantages and disadvantages of commercial ranching (u)
q. understand the conflicts between pastoralists and arable farmers (u)
r. draw maps to show typical farms in Africa (s)
s. recognise and describe types of agriculture in Africa from photographs (s)
t. describe the climate of a pastoral farming area from a climate graph (s)
u. draw a map to show the main pastoral farming areas of Africa (s)
v. draw a summary table comparing nomadic pastoral farming with commercial ranching (gs, gs)
w. appreciate the importance of agriculture in African economies and the need to improve agriculture (a, gs)
x. appreciate the difficulties of pastoralists adapting to a modern way of living (a, gs)
y. using photographs, understand how and why the way of life is changing (u)
	• Explain characteristics of cocoa growing in Ghana and compare these with coffee growing in Uganda:
	  • family-owned farms
	  • small size
	  • perennial crop harvested annually once mature
	  • uses family labour
	  • pods split to remove beans
	  • beans dried in sun
	  • transported in bags for export
	  • farmer also grows subsistence crops for food
	  • problems of pests and diseases e.g black pod
	  • problem that overseas market price varies a lot
	  • if prices go down, some farmers stop growing the crop
	Plantations in Liberia
	• Explain that crops are also grown on plantations in many parts of Africa e.g. rubber in Liberia.
	• Support learners to locate and map rubber plantations in Liberia.
	• Learners look up rubber plantations in Liberia on Internet.
	• In pairs, learners use the information below to compare rubber plantations in Liberia with sugar cane or tea plantations in Uganda:
	  • large estates of hundreds of hectares
	  • one single crop
	  • heavy rain and high temperatures all year
	  • flat land and fertile soils
	  • mainly foreign-owned by one American company
	  • needs a lot of capital
	  • most profits sent overseas
	  • highly mechanised for sowing and planting
	  • large labour force needed for harvesting
	  • labour force poorly paid and often work in poor conditions, using child labour
	  • trees yield for many years once mature
	  • rubber harvested by 'tapping' bark of tree so sap flows out
	  • rubber exported for processing overseas	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• good transport to port • overseas market prices vary • monoculture spreads pests and diseases • expansion leads to destruction of large areas of forest • Revise from S1 the advantages and disadvantages of plantations. **Traditional pastoral farming** • Revision: Show learners one or more photographs of Fulani nomadic pastoral farming and a climate graph of the Sahel area. Learners describe the area on the photograph, including the environment and the activities seen. Using the climate graph, explain how the farming is related to the environment. • Learners investigate the main nomadic pastoral areas of Africa and the names of some pastoral groups and create a map of their own to show this. Monitor and help as needed. • Learners work in groups to identify and discuss some of the problems nomads face in the modern world, drawing on own knowledge and further research. **Commercial ranching** • Use a map and photograph of a commercial ranch in Botswana. Ask learners to describe what they see and compare with the nomadic pastoral areas. • Learners use Internet to find out about ranching in Botswana. • Describe the main features of ranching in Botswana and learners summarise in a table the differences between nomadic pastoral farming and ranching. • Learners discuss the advantages of commercial ranching in the modern world. • Learners discuss how difficult it is for nomads to change to commercial farming, but also identify the advantages of doing so. **Conflict between nomadic pastoral farming and arable farmers** • Revision by questioning the effects of climate change making areas drier. • Ask learners why increasing dryness is causing conflicts in Africa between nomadic pastoralists and settled arable farmers (e.g. Fulani in Sahel).	

FORESTRY AND IRRIGATION IN AFRICA; FARMING IN CHINA AND RHINELANDS TOPICS 32 – 36: 36 PERIODS

SENIOR 3: TERM 3

Theme: Forestry and irrigation in Africa; farming in China and Rhine lands

TOPIC 32: FORESTS, FOREST RESOURCES AND FORESTRY IN AFRICA — 6 PERIODS

Competency: After studying this topic, the learner should understand the importance and uses of forest resources in Africa and the importance of preserving these resources

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know where the main forest resources in Africa are (k) b. draw maps to show the areas of the case studies and graphs to illustrate their climates (s) c. know the main uses of the forest resources (k) d. understand the location and reasons for location of the forest resources in Africa (u) e. know the characteristics of the forests in Africa (K) f. understand the importance of forests in terms of the environment (u) g. understand factors favouring the development of a hardwoods industry (u) h. understand the methods of harvesting trees from the forest (u) i. understand the development of the hardwood trade in Gabon (u) j. identify through photographs the characteristics of forests and activities related to logging in Gabon (s) k. present and analyse statistics on the timber industry in Gabon (s, gs) l. draw a map showing the major forested areas and timber processing areas in Gabon (s) m. appreciate the dangers of unsustainable forestry in Africa and the dangers of destroying forests (a, gs) n. form opinions about the dangers of the overuse of the natural vegetation (a) o. form opinions about the dangers of overuse of land and water resources and the need to conserve these in the local area p. understand the effects of human activity on the landscape (u)	**African forests and their importance** • Learners brainstorm from previous knowledge where the main forests in Africa are and how these are related to the climate. What type of timber do they produce? Learners use and make maps to show this information. • Ask learners to use their maps and graphs to explain the location and type of forest and link this to climate. • Learners brainstorm from previous knowledge the main characteristics of tropical rain forests. • Learners work in groups to research African forests on Internet and identify a list of benefits they bring to the environment, people and the economy. • In groups, learners discuss why forests are important in preserving the environment. (preserving, binding and creating soils; absorbing rainfall and giving off transpiration, creating rainfall; absorbing carbon dioxide and minimizing warming of atmosphere and climate change). Groups feed their ideas to class. • Learners use their research and present their data to other groups with explanations. **The use of forests in Gabon** • Explain that African forests mainly contain hard wood trees, the most valuable timber • Ask learners to suggest why a timber industry has developed in Gabon (accessible with flat land, rivers for floating logs, other transport, capital often from overseas, political stability the most important).	• Observe the work they produce to check for accuracy. • Observe as learners explain their findings and make links between the benefits of forests and people's lives. • Monitor pair work, prompt as necessary. In pair exchange, evaluate how well learners explain their ideas. • In conversation, ask learners to explain the dangers of cutting down forests and suggest how this can be prevented. • Observe learners' discussions and explanations using their policy reports to identify strategies to control deforestation and make links to impacts on people, environment and economy.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• Show photographs of logging and ask learners to describe what they see. In pairs, learners construct a flow diagram to show the production, use and export of timber (show clearing roads/paths, chain saws, tree falling, cutting timber into logs, transport, log collection points, export overseas by barge/ship, local use in timber factory). Pairs exchange their flow diagram with another pair and discuss their ideas. • Ask learners why it is better to process the timber and make things in Africa, rather than selling directly overseas. What can be made? What are the difficulties in doing this? (furniture industry, building, paper, main difficulty capital) **Destruction of forests in Africa** • Learners work in groups to research deforestation in Africa using the Internet. They use this research and class discussions to help them assume the role of Minister of Forests and report back with a policy to control the cutting down of forests? • Ask learners if they have heard of illegal destruction or cutting down of forests in Uganda. Why is this happening, and what are the trees used for? (forests cut for timber for sale, for charcoal, and clearing land for farming). • Explain that this is happening in all forested areas of Africa. Ask learners what the dangers are of cutting down too much forest? (See above). What are the difficulties of controlling this? (demand for timber and especially charcoal; increasing population needs more land). • Ask learners how this can be controlled and how we can replace the forests (use strict laws, prevent corruption, replant forests, have laws that you must replace every tree you cut, replace or cut out charcoal by making better stoves, using solar cooking etc.) • Explain that re-planting only works partially, because planted forest does not contain the same variety of species of natural forest and hard wood takes a long time to grow.	

SENIOR 3: TERM 3

Theme: Forestry and irrigation in Africa; farming in China and Rhine lands

TOPIC 33: IRRIGATION FARMING IN AFRICA — 6 PERIODS

Competency: After studying this topic, the learner should understand why irrigation is becoming particularly important in African farming, and the methods of small scale and large-scale irrigation.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. understand how problems of the physical landscape can be overcome with traditional or modern technology (u, a) b. recognise physical and other features on conventional survey maps and photographs (s) c. draw maps to show the areas of the case studies and graphs to illustrate their climates (s) d. know the parts of Africa where irrigation is most important (k) e. know some examples of irrigation schemes in Africa (k) f. know one example of a large-scale irrigation scheme (k) g. understand why irrigation is becoming increasingly important in Africa (u) h. understand the factors leading to the development of the Gezira scheme (u) i. understand how the Gezira scheme works, its benefits and difficulties (u) j. analyse different aspects of the Gezira scheme from statistics and other information (s, gs) k. appreciate the advantages of government cooperation with small scale farmers (a, gs) l. appreciate the dangers of corruption in government schemes (a, gs)	**The importance of irrigation and types of irrigation** • Revision: ask learners why irrigation is important in Africa and becoming increasingly important. • Revision: show pictures of different methods of irrigation and ask learners to describe them. • Learners suggest which parts of Africa are most important for irrigation • Learners work in pairs or groups to research examples of irrigation schemes and jointly contribute to a class map that has the schemes and their countries labelled. **The Gezira irrigation scheme** • Show a map of the position of the Gezira scheme in relation to the branches of the Nile and a climate graph of the Gezira area. Ask learners to suggest why the Gezira scheme was built where it is and factors leading to its development. • *Learners look up Gezira irrigation scheme on Internet and describe what they find out. They use information from climate graphs and maps to help them with the context and create their own annotated map to help explain the location. They use photographs to help them investigate the type of irrigation method used.* • Learners investigate climate graphs over time and discuss present day issues of climate change. They work in groups to come up with ideas as to how this might affect irrigation in some areas. • Describe with diagram the organisation of the Gezira scheme as a cooperation between government and smallholders. • Ask learners to suggest the advantages of cooperation between government and local farmers. • Describe the problems of the Gezira scheme. • Learners suggest some of the problems of schemes organized by governments.	• Through conversation, check learners' understanding and their appropriate use of terminology as they respond to initial questions and discuss this as a class. • Learners use their work to suggest whether a large-scale irrigation scheme based on cooperation between local farmers and government would be suitable for Uganda and give their reasons, using evidence.

SENIOR 3: TERM 3

Theme: Forestry and irrigation in Africa; farming in China and Rhine lands

TOPIC 34: IRRIGATION FARMING IN CHINA — 6 PERIODS

Competency: After studying this topic, the learner should understand why irrigation is important in China and what methods of irrigation are used.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. understand how problems of the physical landscape can be overcome with traditional or modern technology (u, a) b. draw maps to show the areas of the case studies and graphs to illustrate their climates (s) c. know the areas of China where irrigation is important (k) d. know the main crops grown on irrigated farms (k) e. understand the reasons for the importance of irrigation in China (u) f. understand the main methods of irrigation used (u) g. understand the principles and use of hydroponics (u) h. describe irrigation in China from photographs (s) i. appreciate the importance of rice growing and irrigation in China (a, gs) j. appreciate what Uganda can learn from rice farming in China and the Gezira scheme (a, gs)	**Importance of irrigation** • Ask learners, from what they learnt about the climate of China, why irrigation is important (monsoon climate with dry season; very dry areas inland away from coast). • Elicit from learners what main crop of China is - (rice). Ask learners why irrigation is important for growing rice. (land must be flooded). • Use a series of photographs of the stages of rice growing. Explain these and learners draw a flow diagram to show stages in growing rice (ploughing, flooding field, puddling, planting in nursery, transplanting, weeding, harvesting, threshing, winnowing, drying). • Learners research using Internet to locate key areas of rice growing in China and create their own sketch maps. They research some facts and images about the rice growing process at different locations, presenting images with flow charts to explain the stages of rice growing. • Ask why we call rice a labour-intensive crop. • Explain other problems associated with rice growing in China. • Explain how hydroponics is being used for growing rice in China. • Explain other crops of China e.g. wheat and corn in drier areas. • Learners compare the methods of irrigation used in Gezira and China and suggest which is most suitable for Uganda, giving reasons.	Observe as learners explain their recommendations for methods of irrigation suitable for Uganda, using evidence from their research and class discussions.

SENIOR 3: TERM 3

Theme: Forestry and irrigation in Africa; farming in China and Rhine lands

TOPIC 35: AGRICULTURE IN THE RHINELANDS: RECLAIMED LAND IN NETHERLANDS; CATTLE IN SWITZERLAND — 12 PERIODS

Competency: After studying this topic, the learner should understand aspects of agriculture in the Rhinelands, using case studies, and what we can learn from these areas for agriculture in Uganda.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know the location of agricultural regions in the Rhinelands (k) b. know the location of the Netherlands polders, and Swiss Alps (k) c. understand the main characteristics of agriculture in the case study areas (u) d. understand the problems and dangers of reclaiming land (u) e. understand how agriculture in the case study areas is adapted to the climate and physical features of the areas (u) f. understand the differences between European agriculture and East African agriculture (u) g. understand how problems of the physical landscape can be overcome with traditional or modern technology (u, a) h. understand through case studies how selected climates and types of vegetation affect the way of life of the people in those areas (u) i. appreciate that the differences in the ways of life and cultures of people are partly a product of the different climates (a) j. understand the main types of agriculture in Uganda and the rest of East Africa and the factors influencing them (u) k. recognise physical and other features on conventional survey maps and photographs (s) (farming and physical features of the Netherlands) l. draw maps to show the areas of the case studies and graphs to illustrate their climates (s) m. appreciate how challenging environments can be used productively (a, gs)	**Agriculture in the Rhinelands** • Explain that there are many types of agriculture in the Rhinelands. • Explain that nearly all agriculture in Europe is commercial. Ask how this is different from East Africa. • Use a map to show the selected areas for case studies. Ask leaners to work in pairs to identify the areas. **Reclaimed land (polders) in Netherlands** • Use a map of Netherlands showing relief and rivers. • Ask learners to describe the relief and drainage. How many rivers are there and how do they flow? What do we call this kind of area where rivers enter the sea? Describe the relief of the area. What do you notice about the height of the areas near the sea? (below sea level) • In groups, learners discuss and suggest what the difficulties would be of living and developing agriculture in an area like this. • Explain that the people of Netherlands are called Dutch people and their language is called Dutch. • Explain that originally Netherlands was a very flat area on a delta with many rivers causing flooding. • Show a photograph of a windmill. Explain that Dutch invented windmills which are used to turn sails connected to a pump to pump water out of flooded land. Nowadays they have very skilful levels of knowledge about flood control and technology. • Show diagram of flat land with raised canal on the side and windmill. Ask learners why the windmill is on a canal and what the canal is used for? Where does canal lead? (to take away water pumped from land towards river or sea) • *Learners look up Polders on Internet* • Explain that eventually Dutch used this system to drain areas originally under the sea. Show diagram of dykes, windmills and polders and explain.	Monitor pair work to gauge level of understanding of learners. Monitor groups and evaluate insight. Prompt where helpful. Observe pairs' diagrams/models and guide learners to accuracy, so that they will be able to have accurate representations in their books. • Observe as learners use their maps, models and diagrams to make comparisons between their case studies and make recommendations for Uganda. How well do they make the links between climate, landscape and farming type as well as how technology can be of help? Can they identify threats such as a changing climate?

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• Learners work in pairs to draw their own diagrams or make models to help them explain how polders work. • Learners copy these in their books. Explain: Areas drained were protected from sea by dykes or big banks of Earth with canals and windmills along the dykes. Areas drained from below sea level called polders. • Ask learners how this compares with draining swamps in Uganda. • Explain that now nearly half of Netherlands is on polders below sea level. Ask learners what the difficulties and dangers are of living in such areas. What would happen if the dykes broke? (they did break in 1952 with big floods). • Show a diagram and photographs of farms on the polders. Learners describe the crops and types of farming (wheat, flowers, cattle). • Explain that Dutch farming is very intensive, growing wheat, vegetables, flowers and keeping dairy cattle. Ask learners what is produced on dairy farms (milk, butter, cheese, powdered milk) Ask meaning of intensive and what all the crops and dairy produce is used for? (entirely commercial for sale) • Learners research and compare market gardening on the polders with market gardening in Uganda. • Ask learners to suggest what we can learn from Dutch farming and how it has links to Uganda. (Intensive use of land e.g. Dutch and Ugandans are running flower farms in southern and western Uganda. Use of dairy produce e.g. milk packaged and sold, powdered milk produced in Mbarara) **Cattle farming in Switzerland** • Learners use Internet to find out about cattle farming in Switzerland. • Show photograph of cattle farming in Switzerland. Ask learners to describe what they see: the landscape and type of farming. What type of cattle and what are they used for? • Explain: Swiss use mountain valleys to keep dairy cattle used for milk, cheese and powdered milk. Ask how this is similar to farming in Netherlands. (intensive commercial farming) • Ask learners to suggest any areas of Uganda with similar types of farming. (Kabale?)	

SENIOR 3: TERM 3

Theme: Forestry and irrigation in Africa; farming in China and Rhine lands

TOPIC 36: TOURISM IN SWITZERLAND

6 PERIODS

Competency: After studying this topic, the learner should understand why Switzerland is important for tourism and how this compares with Uganda.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. understand the factors influencing tourism in the selected countries (u) b. use statistics, maps and photographs to compare tourism in the selected countries (s) c. analyse statistics of tourism in Switzerland (s) d. appreciate the contribution of tourism to development (a) e. know the major tourist attractions and centres of Switzerland(k) f. understand how the position of Switzerland in Europe favours tourism (u) g. understand the effects of climate on tourism (u) h. understand the economic importance of tourism (u) i. draw a map showing some tourist centres in Switzerland (s) j. appreciate the need to develop good facilities for tourism (v/a, gs) k. appreciate the importance of peace and neutrality in attracting tourists (a, gs) l. compare tourism in Switzerland with tourism in Uganda and suggest what we can learn from it (u, v/a)	**Attractions of Switzerland for tourists** • Use photographs and maps to elicit ideas from learners regarding the influential factors for tourism. • Use photographs of tourist attractions and activities and ask learners to describe these and say why they are attractive to tourists. • Use photographs of tourist facilities and learners say why these are important for tourism. • Use a map of Switzerland in Europe and ask why Switzerland's position in Europe is favourable for tourism. From the ideas on tourism in unit 19, why do many people in Western Europe want to tour to areas of natural scenery? • Learners investigate some of the key tourism areas, using a range of sources including the Internet, and locate these on a paper or digital map. Learners compile their own sketch or digital maps to show these main areas and add labels. Use a climate graph for an area in the Alps and ask learners to suggest which activities are done in each season. (E.g. skiing in winter; sight-seeing in summer.) Learners could create a travel poster for either winter or summer sightseeing, using the main factors that make this place attractive. Working in groups with their posters, each group makes a presentation to the other groups promoting tourism in Switzerland. • Ask learners to suggest why the peace and neutrality of Switzerland has been an important factor in the development of tourism in Switzerland and compare this with East Africa. • Compare these aspects of tourism in Switzerland with those in East Africa. **Importance of tourism** • Present statistics on the importance of tourism in Switzerland. Ask learners to analyse these to show where the tourists come from and the importance of tourism within the economy. • Learners select and present some chosen statistics, using diagrams and maps. • Learners compare this with East Africa	• Observe learners' posters and group presentations to see how well they identify key factors and tourist hot spots. How well do they link location, time of year, climate, landscape and types of activity available? • Learners are asked to compare tourism in Switzerland with tourism in Uganda. They should point out main differences and Similarities. • Ask learners to explain, using their maps/ diagrams where tourists come from and the impact on the national economy.

MINING AND INDUSTRIALISATION IN AFRICA, RHINELANDS AND CHINA
TOPICS 37 – 40: 36 PERIODS

SENIOR 4: TERM 1

Theme: Mining and industrialisation in Africa; Rhine lands and China

TOPIC 37: MINERAL RESOURCES AND MINING IN AFRICA — 9 PERIODS

Competency: After studying this topic, learners should know the main mineral resources in Africa, understand how these can contribute to the development of African countries and why minerals do not always benefit everyone.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. understand the use of mineral resources in the development of any two industries in Uganda (u) b. locate the main mining centres on the map of East Africa (s) c. recognise types and consequences of mining from photographs (s) d. appreciate the positive and negative contribution of mineral resources to development (a) e. understand why most mining is capital-intensive(u) f. understand why most mining in Africa is controlled by overseas companies (u) g. draw a map to show the main mining areas of Africa (s) h. draw diagrams to show the main methods of mining (s) i. appreciate the dangers that most people may not benefit from mining in the countries where mining takes place (a, gs)	**Minerals in Africa** • Use a wall map, sketch map and/or atlas map or Internet map of mineral resources and mining areas in Africa. Learners draw the map and make a table of countries with minerals and the minerals in each. (Use the most important mining areas only, not an exhaustive list). • Revision: From work on minerals in East Africa (topic 15), learners draw diagrams to show the three main methods of mining: open cast, underground and oil extraction. Make a list of the problems of each method. • Learners annotate photographs of mining, identifying what the process is and how it might affect the environment. **Case studies** • Case studies of mining areas: underground gold mining in South Africa; copper mining in Zambia and Congo; oil in Nigeria. Emphasise the social, economic and environmental problems: migrant labour in South Africa; landlocked area, transport problems and politics in Zambia/Congo; pollution in Nigeria (show photographs of pollution in Niger delta) • *Look up one of the above areas on Internet.*	• Observe as learners hold a discussion on whether mining has been a good thing or a bad thing for Africa. • Learners use photographs and their research to explain mining impacts on environments and give reasons, with evidence. (Include a photograph of oil pollution in Nigeria or any other oil mining country in Africa.) • Ask learners to explain the pros and cons of mining and use their research to explain who some winners and losers might be.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Economic benefits of mining • Ask learners to suggest the possible economic benefits of mining to governments and people (profits from taxes and exports, employment, infrastructure development, social service development). • Explain why these economic developments do not always benefit the people of the countries: mines owned by overseas companies who send profits overseas; poor wages paid to miners, especially formerly under apartheid; corruption when the rulers take all the profits and only a few people become rich e.g. Nigeria, Angola; pollution destroying people's land e.g. Nigeria; political conflict partly caused by mining e.g. Congo, Biafra war, Zimbabwe. • Learners discuss the above problems and collaborate in groups to come up recommendations and suggestions as to how we can make sure that most people in a country benefit from mining.	

SENIOR 4: TERM 1

Theme: Mining and industrialisation in Africa; Rhine lands and China

TOPIC 38: INDUSTRIAL DEVELOPMENT IN AFRICA — 9 PERIODS

Competency: After studying this topic, learners should understand the economic importance and difficulties of industrial development in Africa and know the main types of industries which have been developed.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know the meaning of manufacturing industries (k) b. understand the factors influencing the distribution and development of any three manufacturing industries (u) c. understand the effects of manufacturing industries on the environment (u) d. understand the use of energy resources in the development of manufacturing industries in Uganda or the rest of East Africa (u) e. visit a local factory to find out how a factory works and show its effects on the environment (s) f. appreciate the contribution of manufacturing industries in transforming primary products (a, v) g. understand the benefits manufacturing industries can bring to African countries (u) h. understand the problems of developing manufacturing industries in African countries (u) i. study, through research, examples of areas with manufacturing industries (gs) j. Draw a map showing important industrial areas in Africa. (s) k. appreciate why many African countries are trying to develop manufacturing industries (a, gs)	**Manufacturing industries** • Revision by questioning: remind learners that in studying East Africa, they learnt about three kinds of industries: mining industries; agricultural processing industries; manufacturing industries. Explain that they have looked at mining industries and agricultural processing industries in different topics. Now we will look at manufacturing industries. Ask what two kinds of manufacturing industries there are? (consumer goods and industrial/producer goods). • Either recap an earlier fieldtrip to a factory site or arrange a visit and ask learners to create a small case study identifying what happens there, the positive and negative impacts on people, environment and economy and explain how they feel about it. • Use a map to show examples of manufacturing goods in industrial areas in Africa (Accra-Tema, Ghana; Lower Egypt industrial area; Witwatersrand or Rand industrial area, South Africa). Learners draw their own map or annotate a digital one. • Learners construct a table to compare these industrial areas under the following headings and illustrate with their own drawn or digitally sourced maps:	• Evaluate learners' case studies to see how much their prior learning has been consolidated. • Ask learners to choose one industrial area. They use their map and information to explain why it was developed; what industries are found; what benefits it brings to the country; and what problems it has. Observe what they produce to explore relevance and accuracy.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

Factors	Accra-Tema	Egypt	Rand
Raw materials			
Power			
Raw materials			
Fresh water			
Land			
Relief			
Transport			
Capital			
Labour			
Market			
Government policies			

- Explain for each area the main industries and the ownership of industries.
- *Learners use Internet to help them compile the above table.*
- Learners discuss the advantages of African countries establishing manufacturing industries.

SENIOR 4: TERM 1

Theme: Mining and industrialisation in Africa; Rhine lands and China

TOPIC 39: MINING AND INDUSTRIAL DEVELOPMENT IN THE RUHR — 9 PERIODS

Competency: After studying this topic, learners should understand why industries developed in the Ruhr, the industries which developed, later changes in the industries and competition from other countries.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know the location of the Ruhr in the Rhinelands (k) b. know the mining and industries which developed there (k) c. understand the factors which led to the development of industries in the Ruhr are (u) d. use photos and statistics to illustrate industrialisation (s) e. understand the history of the development of industries in the Ruhr (u) f. understand the importance of the European Union in industrial development in Europe and Germany (u) g. understand the competition from other areas and changes in the industries in the Ruhr (u) h. draw a map to show the location of the Ruhr industrial area (s) i. appreciate the importance of power and transport in the development of industries (a, gs) j. appreciate that the European Union may have lessons for the East African Community and the development of industries in Uganda and East Africa (a, gs)	**Growth of industries in the Ruhr** • Show a map of the Ruhr industrial area and the coalfield, showing rivers, canals, coalfield, towns and position in relation to Rhinelands. • *Learners use the Internet to research facts about the Ruhr industrial area and compare notes. They create their own maps with annotations.* • Explain that this is one of the main industrial areas of Europe. It originally developed heavy industries i.e. industries producing goods for use in other industries, especially iron and steel. Ask learners to use the map to suggest what advantages the Ruhr area had for the development of heavy industries, including iron and steel. • Discuss the answers and further explain the factors leading to development of heavy industry (coal, rivers and canals for transporting heavy goods, flat land, position in the middle of western Europe giving a big market, capital from Germany which was a rich country, skilled labour as Germany had well developed education, connection with Britain where industrial revolution started). • Ask learners what goods from Germany are sold in Uganda? (cars like Mercedes, Volkswagen and Audi, electrical goods and technology). • Explain the history of the Ruhr: Germany was involved in First and Second World Wars leading to destruction of industries. Formation of European Union (formerly European Economic Community) bringing together European countries, especially Germany, France and Britain, which had always fought each other. Free trade without customs between countries gave very big market for goods from Ruhr. Later disagreements, with Britain leaving.	Evaluate learners' maps to record how effectively they researched the Ruhr area. • Observe as learners describe the history of industry in the Ruhr and the changes which have taken place to the present day. Ask learners to explain what lessons if any East Africa can learn from this, using evidence to support their claims.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Comparison with East Africa • Ask learners how this compares with formation of East African Community. (idea of big market with no customs but still many disagreements). • Explain changes in Ruhr. Ask why Asian countries (e.g. China) can produce goods cheaper than Europe? (Because of lower wages). Asian countries competed in heavy industries including steel and vehicles. Ruhr now produces less steel and fewer vehicles, and it has moved into more specialised technology like computers and mobile phones.	

SENIOR 4: TERM 1

Theme: Mining and industrialisation in Africa; Rhine lands and China

TOPIC 40: MINING AND INDUSTRIAL DEVELOPMENT IN CHINA — 9 PERIODS

Competency: After studying this topic, the learners should understand why and how industries developed in China, the industries which developed, and later changes in the industries.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know the minerals found in China (k) b. know the types of industries in China (K) c. draw a map to indicate the main mining and industrial areas of China (s) d. understand how China developed industries (u) e. realise the role of the government and central planning in this (u) f. understand changes in industries in China (u) g. understand the importance of Africa as a market for Chinese goods and investment (u) h. appreciate the growing importance of China in the economic development of Africa (a, gs)	**Minerals and mining in China** • Use a wall map, atlas map or Internet map to show location of the main minerals. Learners find these with their own sources and create their own maps. • Explain the importance of minerals in the development of industries in China. **Industrial development in China** • Explain the importance of government policy in the development of industries in China: communist control of the economy and industrial development – the Great Leap Forward. Later government control of industrial development. • Learners work in groups to research facts about industrial development in China, using the Internet and other sources, and make a small presentation with maps and charts to illustrate this. They investigate current news stories to search for information about Chinese investment in Uganda. • Ask learners what kinds of products from China are sold in Uganda. (Cheap consumer goods, textiles, plastics etc., electronic goods esp. mobile phones and computers). • Explain the industries developed in China and changes in these: starting with heavy industries (iron and steel etc.); consumer goods industries based on cheap labour; changes to more advanced technological industries as wages increased. • Explain advantages of China for development of industries: minerals and other raw materials; very large population for cheap labour and big market; education emphasising technical and industrial skills; government control and encouragement. • Ask learners if they can name any projects in Uganda or other areas of Africa where Chinese are investing. What sort of projects are these? Why are they good at these? (roads, railways, hydro-electricity: large scale projects where they have experts backed by large companies).	• Evaluate accuracy of learners' maps. • Observe as learners explain whether most African countries have the same advantages for development of industries as China. • Learners use their research to give their views on the pros and cons of Chinese investment in Uganda, giving examples of small and large-scale projects as explanation.

POPULATION AND URBAN DEVELOPMENT IN AFRICA, CHINA AND ROTTERDAM TOPICS: 41 – 43: 36 PERIODS

SENIOR 4: TERM 2

Theme: Population and urban development in Africa, China, and Rotterdam

TOPIC 41: POPULATION AND URBANISATION IN AFRICA — 16 PERIODS

Competency: After studying this topic, the learners should understand the growth rates and distribution of population in Africa, reasons for rapid urbanisation and consequences of this.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. understand the concepts related to population (u)
b. understand the relationship between population, resources and the provision of services (u)
c. understand the demographic transition model and how this relates to the historical growth and population structures of East Africa
d. understand the factors which have led to rapid population increase in Uganda and the rest of East Africa
e. use maps, statistics, graphs and diagrams to analyse population (s)
f. know areas of high, moderate and low population density in Africa (k)
g. locate and name some major urban areas in Africa (k, s)
h. understand the distribution of population in Africa and reasons for it (u)
i. understand why the population of some countries is growing faster than others (u)
j. form opinions about the advantages and problems of having a large or rapidly increasing population in a country (a)
k. understand the methods which can be used to control the rate of population growth
l. form opinions on the need for, and use of population control methods (a)
m. use statistics and graphs to show rapid urban development
n. understand rural-urban migration and the reasons for this (u)
o. understand the rapid growth of urban area (u)
	Population growth
	• Revision by questioning: Ask learners to explain birth and death rates, and how these rates affect population growth.
	• Use statistics of Africa's population about every 10 years from 1900 to date. Ask learners to describe the growth of population during this period.
	• Learners use Internet to find the above figures.
	• Learners suggest reasons for this rapid growth of population:
	  • high fertility rate
	  • high birth rate
	  • early marriage
	  • polygamy
	  • decreasing death rate due to improved medicine
	  • cultural and religious influences – tradition of many children and opposition to birth control
	Distribution of population
	• Use a map of the distribution of African population.
	• Ask learners to list main areas of high density (over 40 persons per sq. km.), moderate density (10 – 40 people per sq. km.) and low density (fewer than 10 persons per sq. km.) and suggest reasons for these.
	• Learners work in groups to discuss and list the factors which affect the density of population in Africa:
		• Eliciting as much information as possible from learners, evaluate how well they can recall prior learning.
		Monitor group discussion and prompt learners where necessary.
		• Listen to learners discuss and give their opinions about the rapid growth of population in Africa: they give reasons and suggest strategies, using evidence.
		• Ask learners to use maps and graphs to analyse rapid urbanisation and its problems. Observe their discussions and solutions and evaluate their reasons.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

p. understand the problems facing urban areas and the effects of urbanisation on the environment
q. draw maps to show the main areas of high density of population and main urban areas of Africa (s)
r. appreciate the need for planning urban areas and urban growth (a, gs)
s. understand the relationship between a rapidly growing population and urbanisation (u)
	• climate, esp. rainfall
	• soils
	• vegetation
	• historical events – slave trade and colonialism
	• minerals and mining
	• industrial development
	• urban development
	• transport
	• migration and refugees
	Problems caused by rapid population increase
	• Learners look up population growth on Internet.
	• Learners work in pairs and discuss the problems caused by increasing rate of population growth and high densities of population, drawing on their own experience and previous discussion of Uganda (topic 21). Look at rural and urban areas. Compare views with another pair.
	• As a whole class, learners discuss and give opinions if African countries should try to reduce high rate of population growth, giving reasons.
	• Ask learners how the rate of population growth can be reduced and whether they agree with possible methods:
	  • birth control and family planning
	  • abstinence
	  • education of women
	  • education of men
	  • limiting number of children allowed in a family, as in China
	Urbanisation in Africa
	• Learners make a statistical analysis of the population growth in some urban areas.
	• Learners choose some urban areas/cities in Africa. Look them up on Internet and describe characteristics.
	• Learners discuss causes of rural-urban drift.
	• Learners discuss and list problems caused by rapid urban growth: revision of topic 21.
	• Learners discuss the need for planning urban areas.
	• Learners look up Lagos on Internet
	• Case study of an urban area in Africa: Lagos or similar area, emphasising growing inequality and social problems caused.
	• Learners discuss ways in which urban problems can be solved or alleviated	

SENIOR 4: TERM 2

Theme: Population and urban development in Africa, China, and Rotterdam

TOPIC 42: POPULATION AND URBANISATION IN CHINA — 12 PERIODS

Competency: After studying this topic, learners should understand the size of the Chinese population, the history of its growth rate and the one-child policy to slow the growth.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know the total population of China(k) b. know the changes in her population growth rate (k) c. know the number and size of some urban areas in China(k) d. understand the size and rapid growth of China's population and reasons for this (u) e. form opinions about the advantages and problems of having a large or rapidly increasing population in a country (a) f. understand the reasons for the adoption of the one child policy (u) g. understand the consequences of the policy and changes in it (u) h. understand the reasons for rural-urban drift and growth of urban areas in China (u) i. understand the growth of Shanghai as a major city (u) j. understand government control over the growth of urban areas (u) k. use maps, statistics, graphs and diagrams to analyse population (s) l. draw a map to show the major urban areas of China (s) m. understand the methods which can be used to control the rate of population growth n. appreciate the advantages and disadvantages of the one child policy (a, gs) o. form opinions about the advantages and problems of having a large or rapidly increasing population in a country (a) p. form opinions on the need for, and use of population control methods (a)	**China's population and population growth** • Use a table to show the population of the world's biggest countries, and some countries of Africa, as a proportion of the world's population. Learners compare the populations and realise the size of China compared to other countries. • Learners use Internet to find figures for the above table. • Use a table or graph of China's population from about 1900 to the present. Ask learners to describe the growth of population during this period. • Learners use Internet to construct the above table or graph • Learners suggest reasons for the rapid growth and the later decline of the growth rate. Compare this with East Africa and other African countries (rapid growth but no decline in rate). • Explain the rapid growth: due to large birth rate but decreasing death rate due to modern medicine, as in Africa. • Explain the one-child policy and its effect on growth. Explain other social consequences of one child policy: special treatment of one child; abortions of female children as males are more important in culture; imbalance of males and females and not enough females for men to marry. • Explain reasons for change to two-child policy. • *Learners work in pairs to investigate and research the one-child policy in China on Internet and share the information they have found with their group.*	Observe learners' use of sources and effectiveness in applying researched information in tables and graphs. Evaluate how effectively learners recall prior learning. • Learners use their research and class discussions to explain how the government controls the population and movement to urban areas in China. In conversation, ask them to explain their views. • Learners discuss and give reasons as to whether such policies are possible or desirable in Uganda or other African countries.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Urban areas in China • Show table of number and size of urban areas in China with large populations. • Learners suggest reasons for increasing size of urban areas based on topic 41 on industrialisation. • Explain control of rural-urban drift and population migration in China (people need permission to move to urban areas or they do not get social services, including free education). Ask learners what problems may be avoided by this policy. • Discuss whether this policy would be good in Africa, including Uganda. • Locate Shanghai on a map. • Learners suggest why Shanghai has become a big city. • Explain the reasons for the growth of Shanghai, including its original growth as a European enclave like Hong Kong	

SENIOR 4: TERM 2

Theme: Population and Urban Development in Africa, China, and Rotterdam

TOPIC 43: URBAN AREAS IN NETHERLANDS: ROTTERDAM — 6 PERIODS

Competency: After studying this topic, learners should understand the reasons why Rotterdam has developed into a large urban area and how they have solved the problems of urban growth.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. know the location and size of Rotterdam (k)
b. understand why Rotterdam grew into a big city (u)
c. form opinions about the advantages and problems of having a large or rapidly increasing population in a country (a)
d. use maps, statistics, graphs and diagrams to analyse population (s)
e. appreciate why European cities are growing much more slowly than African cities today (a, gs)
f. explain why Rotterdam is growing less rapidly than most African cities today
g. appreciate any lessons Uganda can learn from the development of European cities like Rotterdam (a, gs)
	Rotterdam
	• Learners research Rotterdam on Internet, to find out where it is and what it is like.
	• Use a map to show location of Rotterdam
	• Learners suggest why Rotterdam has grown as a port:
	  • on Rhine
	  • Rhine an important waterway by river and route way by land to Germany and centre of Europe: rich farming area and industrial area
	  • on North Sea, giving access to other European ports and the world
	  • entrepot: trade in which a port imports goods from overseas and re-exports them to inland countries, or gathers goods from inland countries to export to other countries. Learners give examples of this from East Africa.
	• Explain that Netherlands always looked towards the sea and was one of the first countries in Europe to explore overseas outside Europe, establishing a colony in South Africa and ruling Indonesia, so trade is very important to Netherlands. Netherlands ruled areas overseas far larger than Netherlands itself.
	• Discuss how this has led to the importance of Rotterdam.
	• Present, and ask learners to analyse, statistics to show growth of Rotterdam since 19th century. Ask what main period of growth was and what is happening to rate of growth today.
		• Learners compare Rotterdam with any big town in East Africa and describe and explain the similarities and differences, using maps and statistics to back up their claims.
		Observe how accurately learners can provide reasons why Rotterdam has grown as a port. Elicit as much as possible before explaining.
		Evaluate learners' ability to justify their opinions.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

	Solving urban problems
	• Explain how Rotterdam and other European cities have solved some of the problems of urban areas:
	  • industrialisation created more jobs, so those who moved to cities were employed in industries or services to serve the industries
	  • slums have been cleared and replaced by better housing
	  • transport: development of public transport instead of relying on private cars, and restriction of private cars from going into city centres
	  • policies of taxing the rich and providing social services to the poor have led to less inequality
	  • this in turn leads to reduction in crime rates
	• Ask learners to discuss whether any of these policies would work in Africa. Give reasons.	

TRANSPORT, COMMUNICATION AND TRADE IN AFRICA; TRADE BETWEEN AFRICA AND EUROPEAN UNION (RHINELANDS); TRADE BETWEEN AFRICA AND CHINA: TOPICS 44 – 45: 18 PERIODS

SENIOR 4: TERM 3 **Theme: Transport, communication and trade in Africa**

TOPIC 44: DEVELOPMENT OF TRANSPORT, COMMUNICATION AND TRADE IN AFRICA

10 PERIODS

Competency: After studying this topic, learners should understand the main forms of transport and communication in Africa; the main forms of trade in Africa and the advantages and disadvantages of each.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a. use maps to show the major transport routes (s)
b. understand the role of the different types of transport in development (u)
c. use photographs to identify the different types/modes of transport (s)
d. form opinions on the importance of transport in national and regional development (a)
e. understand the difference between internal transport, inter-African transport and international transport (u)
f. understand how the main forms of transport used for international journeys are different from those used in inter-African and internal transport (u)
g. know the characteristics of the main forms of inter-African transport (k)
h. form opinions about the advantages, disadvantages and uses of the main forms of inter-African transport (u, a, gs)
i. understand the development of water transport in Africa (u)
j. understand why inter-African transport is less developed than transport between Africa and the rest of the world (u)
k. know the main forms of international transport (k)
l. understand the main forms of trade in Africa: internal, inter-African and international (u)
m. understand the reasons for this pattern of trade (u)
	Transport in Africa
	• Use a map showing the main railways, important inter-African roads, main navigable waterways, main international airports and main ports of Africa. (Note: show only the very important ones.)
	• Learners make a table of the above, showing type of transport, from where to where, and countries linked.
	• Learners suggest reasons for this pattern of transport:
	  • transport developed by colonial powers more interested in exporting raw materials outside Africa and importing industrial goods than inter-African trade
	  • transport networks mainly developed within each country's borders or within countries linked politically e.g. East Africa or southern Africa
	  • different colonial powers introduced railways with different gauges
	  • many countries produce the same kinds of goods, so no need for trade
	• Explain the physical problems of African transport e.g. Congo.
	• Ask learners which types of transport are likely to be important for inter-African trade (road and air, and rail in some places). Which types of transport are important for international trade outside Africa? (ship and air)
	• Ask learners to suggest the usefulness and advantages of developing inland water transport e.g. on Congo River. Ask learners the importance of developing ports in Africa.
		• Observe learners making tables and evaluate their transparency and effectiveness in delivering information.
		• Evaluate how effectively learners are consolidating their prior learning, and ability to build on this.
		• Observe learners as they discuss and explain the problems facing inter-African trade. How well can they identify the advantages and disadvantages of developing more inter-African trade?
		• Note how well learners explain whether and how the internet will improve trade within Africa. To what extent are they able to back this up with reasons.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
n. understand the trade patterns of the selected countries and the factors influencing them (u) o. understand the contributions of trade to the development of the selected countries (s) p. use flow charts, statistics and maps to show trade patterns (s) q. understand the main forms of international communications (u) r. understand how the Internet has transformed international communication (u) s. analyse statistics of trade in African countries (s) t. appreciate the importance of promoting inter African transport and communication to promote African unity and trade (a, gs)	**The role of China in developing African transport** • Learners use Internet to look up: China: railway building in Africa. • Refer back to Chinese investment in large-scale projects in Africa (topic 41). • Explain Chinese investment in railways in Africa: the Tanzam railway in 1970s and the East African Standard gauge railway today. • Ask learners to suggest the advantages and disadvantages of Chinese investment in railways in Africa. **Trade in Africa** • From previous knowledge, learners list the main forms of trade: inter-African and international. Learners explain why international trade is more important to most African countries than inter-African trade • Use an example of trade statistics of two African countries and learners comment on them. • Learners find on the Internet trade statistics for two African countries and compare the trade. • In groups, learners discuss and explain the problems facing inter-African trade. They identify the advantages and disadvantages of developing more inter-African trade. **Communications in Africa** • Revision: learners list the main forms of communication in the past and today. • Ask learners how they would communicate with people in other African countries. • Learners suggest the changes in communication brought about by the Internet and social media. How has this helped Africa? • Learners explain whether and how the internet will improve trade within Africa and back this up with reasons.	

SENIOR 4: TERM 3 Theme: Transport, communication and trade in Africa

TOPIC 45: TRADE BETWEEN EUROPE, ESPECIALLY THE RHINELANDS, AND AFRICA; AND BETWEEN CHINA AND AFRICA 8 PERIODS

Competency: After studying this topic, the learners should know and understand the main forms of trade between Europe, including the Rhinelands, and Africa and the advantages and disadvantages for both sides; the trade between China and Africa and the reasons for its increasing importance.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know the trade which exists between Europe, especially the Rhinelands, and Africa (k) b. know the trade between China and Africa (k) c. understand the benefits of trade to both sides (u) d. appreciate the role of trade in development (a) e. use flow charts, statistics and maps to show trade patterns (s) f. form opinions about these two types of trade with Europe and China (a) g. analyse the trade statistics between the European Union and African countries and China and Africa (s) h. appreciate the difficulties of negotiating trade agreements (a, gs) i. appreciate the increasing importance of China in Africa and African development (a, gs) j. appreciate the need for an economic system which helps to distribute the resources in an equitable way (a)	**Trade between the European Union and East Africa** • Explain that the countries in the Rhinelands are all part of a wider political union called the European Union (EU), with 27 countries in Europe. (NB UK currently due to leave in March 2019). For trade they negotiate as one body • Present the trade statistics for one or more years between the EU and any one African country. Give a series of questions for learners to analyse these statistics. What kinds of goods do the African countries export to Europe and what kind do European countries export to Africa? • Learners do above activity obtaining statistics from the Internet. • Learners discuss what benefits this trade brings to the EU and to African countries. • Explain that in 2017 the EU was negotiating a trade agreement with East Africa where the goods from each side would enter the other side without paying duty. Ask learners to suggest what benefits this would bring to each side. Learners find out if this has now been agreed. • Ask learners to suggest the problems this might bring East African countries in developing industries. • In trade negotiations, which countries do you think are most powerful: the developed industrialised countries or the less developed non-industrialised countries? Explain your reasons.	• Learners use what they have learnt to report whether they believe a duty- free agreement with the European Union would. Observe and note to what extent learners can give reasons. • Learners explain what it means and identify the pros and cons of free trade. Observe and note to what extent learners can they explain their reasons. • Learners suggest what is fair, and what is not, in trade relations with other countries such as China and explain why.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Trade between Africa and China • Ask learners what kinds of goods which they buy are made in China. Refer to prior learning. • Learners use Internet to find statistics of trade between East Africa and China. • Refer back to the development of industries in China (topic 41). Ask learners why many Chinese goods are very cheap (low wages in China compared with 'western' industrialised countries; mass production giving 'economies of scale'; some goods of very low standard) • In China, wages are increasing: what effect might this have on trade? (Goods become more expensive and cheaper to buy from other Asian countries; China beginning to export more technically advanced goods like mobile phones, computers, televisions etc.)	

ASSESSING GEOGRAPHY

This section should be considered alongside the Assessment Guidelines.

Assessing the new expectations for learning

The new curriculum sets new expectations for learning, with a shift from Learning Outcomes that focus mainly on knowledge to those that focus on skills and deeper understanding. These new Learning Outcomes require a different approach to assessment.

The "Learning Outcomes" in the syllabuses are set out in terms of Knowledge, Understanding, Skills, and Attitudes. This is what is referred to by the letters k,u,s & a.

It is not possible to assess 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 attitudes are not important. It means that we must value things that we cannot easily assess.

So this guidance booklet focuses on knowledge, skills and understanding. Each has its own implications for learning and assessment.

Knowledge	The retention of information
Understanding	Putting knowledge into a framework of meaning – the development of a 'concept'.
Skill	The ability to perform a physical or mental act or operation

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

Knowledge

Knowledge is the easiest to assess because it is fairly straightforward to find out whether or not a learner has retained some information: a simple question can usually find this out. We ask them to name something, or state something, or label a diagram.

Understanding

Assessing deeper understanding is much more difficult, so we usually ask learners to explain, compare or outline a process. This can be done orally (in conversation) or in writing, and will give us some idea of the extent of their understanding.

Skills

Skills are the ability to perform a mental or physical operation, so we have to observe the skill being performed or look at the product, or outcome, of the skill; for example a piece of writing, a picture or diagram. Some skills, such as speaking or a physical education skill do not have a product so need to be observed.

Examinations

There will no longer be examinations or tests set at the end of every year. Instead, there will be a summing up of on-going teacher assessments made in the context of learning.

The final examination at the end of Senior 4 will be very different in nature, and will focus on the learners' ability to apply their learning in new situations, rather than on the ability to recall information.

Formative Assessment

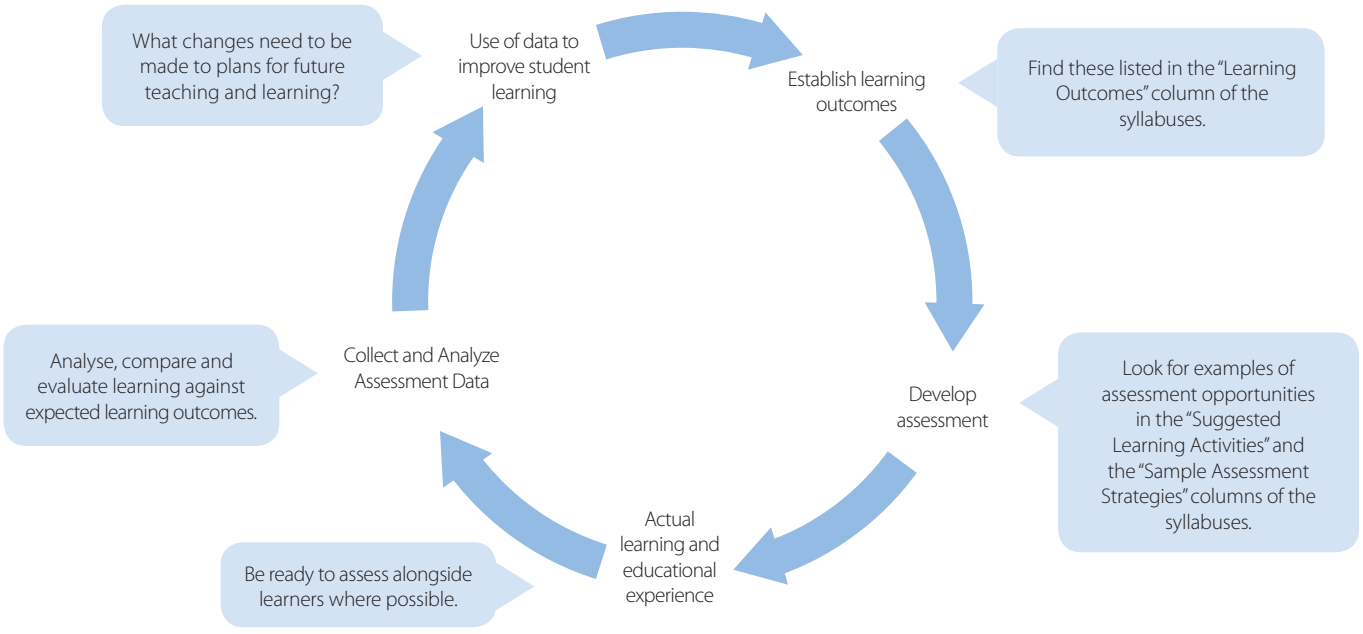
If assessment is to make a difference to teaching and learning, then teachers must use the information they gain from assessment to make some change to the teaching and learning process. This is formative assessment. If teaching and learning stay the same, there would have been no point in carrying out the assessment. The changes that can be made include decisions about:

- What needs to be learned next
- Whether an element of the syllabus needs to be taught again in a different way
- Changing teaching approaches if necessary
- Identifying learners who need more support, or who are making exceptional progress
- Enabling learners to understand what they have to do to improve

It is the use of the assessment data within this cycle to improve learning that is key to the success and impact of formative assessment.
It is this cycle that enables formative assessment to impact on learning:

- The syllabuses set out the learning outcomes
- The lessons seek to achieve these outcomes
- Assessment finds out whether or not the outcomes has been achieved
- This information guides the next steps in learning and so sets new learning outcomes

The process of teaching, making formative assessments and then changing the teaching and learning in some way can be seen as a cycle:



FORMATIVE ASSESSMENT INVOLVES USING ALL PARTS OF THE CYCLE.

ASSESSING GEOGRAPHY

How do we find the opportunity to make formative assessments?

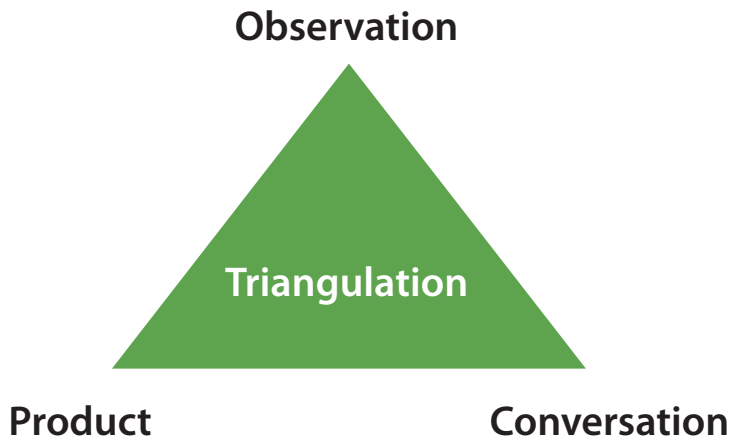
In the new curriculum, the teacher's assessment role is not to write tests for learners, but to make professional judgements about learners' learning in the course of the normal teaching and learning process. The professional judgement is about how far the learner meets the Learning Outcomes that are set out in this syllabus. To make these judgements the teacher needs to look at how well the learners are performing in terms of each Learning Outcome.

School-based formative assessment is a part of the normal teaching and learning process, and so the assessment opportunities will also occur during this normal process. It is not something that needs to be added on after learning; it is an integral part of it.

These opportunities occur in three forms and are often called:

- Observation – watching learners working (good for assessing skills)
- Conversation – asking questions and talking to learners (good for assessing knowledge and understanding)
- Product – appraising the learner's work (writing, report, translation, calculation, presentation, map, diagram, model, drawing, painting etc). In this context, a "product" is seen as something physical and permanent that the teacher can keep and look at, not something that the learner says.

When all three are used, the information from any one can be checked against the other two forms of assessment opportunity (eg evidence from "observation" can be checked against evidence from "conversation" and "product"). This is often referred to as "triangulation".



Triangulation of assessment opportunities

To find these opportunities, look at the syllabus units. These set out the learning that is expected and give 'Sample Assessment Activities", and in doing so they contain a range of opportunities for the three forms of assessment.

Generic Skills

The Generic Skills have been built into the syllabuses and are part of the Learning Outcomes. It is therefore not necessary to assess them separately. It is the increasingly complex context of the subject content that provides progression in the Generic Skills, and so they are assessed as part of the subject Learning Outcomes.

Attitudes

It is not possible to assess 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 attitudes are not important. It means that we must value things that we cannot easily assess.

Record keeping

Keeping detailed records of learners' individual progress is always difficult with very large numbers of pupils. For the purposes of school-based formative assessment, it is not even always necessary to keep such detailed records anyway. If feedback is give immediately and action is taken, then learning is changed and the record would soon become out of date and redundant.

Most formative class-based assessments are dynamic in that they feed straight back into the teaching and learning process. Therefore detailed records of these are not appropriate.

What is needed is record of assessments of learners' learning made in terms of each Topic or unit. This means recording the on-going summative assessments of each unit. There is no need to make separate records of each of the Learning Outcomes because this would be very time-consuming and also unnecessary. It is much more useful to make an overall assessment about whether or not each learner met the Learning Outcomes for each Topic as a whole.

Each Sub-Strand is made up of a number of Learning Outcomes. Therefore teachers need to consider all the Learning Outcomes when making an overall judgement about the Sub-Strand as a whole. It is not always necessary for every individual Learning Outcome to be achieved for the Sib-Strand as a whole to be achieved. This will vary with the Learning Area and Topic.

By looking at the Learning Outcomes within each Topic, it is possible to identify four broad groups of learners in terms of their achievements:

Descriptor
No Learning Outcome (LO) achieved
Some LOs achieved, but not sufficient for overall achievement
Most LOs achieved, enough for overall achievement
All LOs achieved – achievement with ease

ASSESSING GEOGRAPHY

There is no need to set a test to find this out.

These overall assessments should be made on the basis of the many formative assessments that the teacher has made during the course of teaching the unit. If teachers have been working with the learners over the course of the unit, they will be able to make a broad judgment about which learners have achieved or have failed to achieve the unit's overall Learning Expectation. These "Authentic Assessments" will be more valid and valuable than a test set by the school.

Recording these overall assessments will be simple, manageable and yet valuable, and can be recorded on a sheet such as the one below in which the categories are indicated with a number.

Although a very simple process, these four categories will give rich data when a comparison is made between the learners in each category for different subjects and units. They will also identify easily those learners who need extra support or who may not be ready to move on to the next grade at the end of a year.

If records are kept of the learning outcomes of each syllabus unit through the year, then there will be no need for an end of year test. Teachers will already have a record of those learners who have met the learning outcomes, and those who have not done so. Therefore teachers will know if there were any learners not ready to progress to the next grade.

An overall record should be made of the individual unit assessments by subject in terms of the 4 descriptors. If numbers (0-3) are used as identifiers, then it will be possible to arrive at an overall number for a year by aggregating the identifiers for each unit.

Descriptor	Identifier
No Learning outcome achieved	0
Some LOs achieved, but not sufficient for overall achievement	1
Most LOs achieved, enough for overall achievement	2
All LOs achieved – achievement with ease	3

In the example below, the table shows the end-of-unit assessment for six learners.

	Geography									
	T1	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**	**T8**	**T9**	**T10**
Learner A	3	3	2	3	3	3	3	2	3	3
Learner B	2	2	3	2	3	2	2	2	3	2
Learner C	1	1	2	1	1	2	2	3	2	3
Learner D	1	1	2	1	1	2	1	1	2	1
Learner E	0	1	2	1	0	1	0	1	1	1
Learner F	0	0	1	0	0	1	0	0	1	0

This method will give much more information than using a tick. For example, at a glance it can be seen that learners A & B are achieving much higher than learners E & F. It can be seen that Learner C has improved during the year. We can even see that more learners achieved success in Topic 9 than Topic 7.

All of this is very valuable assessment information and can be used to improve learning.

This summative teacher assessment will contribute to the final grade of the School Leaving Certificate.

Glossary of Key Terms

TERM	DEFINITION
Competency Curriculum	One in which learners develop the ability to apply their learning with confidence in a range of situations.
Differentiation	The design or adaptation of learning experiences to suit an individual learner's needs, strengths, preferences, and abilities.
Formative Assessment	The process of judging a learner's performance, by interpreting the responses to tasks, in order to gauge progress and inform subsequent learning steps.
Generic skill	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.
Inclusion	An approach to planning learning experiences which allows each student to feel confident, respected and safe and equipped to learn at his or her full potential.
Learning Outcome	A statement which specifies what the learner should know, under-stand, or be able to do within a particular aspect of a subject.
Process Skill	A capability acquired by following the programme of study in a particular Learning Area; enables a learner to apply the knowledge and understanding of the Learning Area.
Sample Assessment Activity	An activity which gives a learner the opportunity to show the ex-tent to which s/he has achieved the Learning Outcomes. This is usually pat of the normal teaching and learning process, and not something extra at the end of a topic.
Suggested Learning Activity	An aspect of the normal teaching and learning process that will enable a formative assessment to be made.

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NATIONAL CURRICULUM
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