THE REPUBLIC OF UGANDA

Lower Secondary Curriculum

GEOGRAPHY SYLLABUS

NCDC
NATIONAL CURRICULUM DEVELOPMENT CENTRE

CONTENTS

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FOREWORD

This Syllabus presents the four-year syllabus for Geography, which is one of the 20 subjects of the Lower Secondary School Curriculum. The Lower Secondary syllabus for Geography builds upon concepts, skills, attitudes and values developed in Social Studies in the Primary School. The Learning Outcomes of the syllabus give the learner opportunities to develop understanding and skills within different topics. The learner can achieve the Learning Outcomes within specific topics and sub-topics at levels commensurate with his/her abilities. The study of Geography imparts a range of important skills, such as mapping skills, data interpretation and critical evaluation, which are crucial in the modern world. Learner acquisition of these skills is a central intention of this syllabus.

Geography helps learners to be active citizens of the communities in which they live and work. Learners become aware of the interdependence between Uganda and other countries. It inculcates in the learner a sense of appreciation and responsibility for the society and the natural environment. It helps the learner to become an informed citizen through life-long learning. It also provides a sound foundation for further learning in the disciplines of Geography, Economics or Politics.

There is a blend of chronological and case-study approaches in the organisation of the topics and sub-topics. Fieldwork and case-study approaches will make school learning relevant to the experiences of the learner. The challenge for teachers of Geography is to shape the learning experiences so that the needs and interests of all learners are catered for and to facilitate the learner in becoming aware of his/her nation's geography. The goal should be to facilitate the learner's understanding of the country's challenges and the strategies used to overcome these.

As the Minister responsible for the provision of education, I endorse this syllabus as the official document for the learning and teaching of Geography at Lower Secondary School level throughout the country.

Hon. Janet K. Museveni
The First Lady and Minister for Education and Sports

ACKNOWLEDGEMENT

National Curriculum Development Centre (NCDC) would like to express its appreciation to all those who worked tirelessly towards the production of this Lower Secondary Syllabus.

Our gratitude goes to the Ministry of Education and Sports (MoES), for overseeing the development of the syllabus and taking timely decisions whenever necessary. They have worked as a team with NCDC to produce this syllabus. Their decisions have been invaluable in getting this work completed as required. Our thanks also go to our partners in education who provided the necessary guidance.

We would also like to thank the members of the public who made helpful contributions towards shaping this syllabus. Their efforts are invaluable towards having this syllabus implemented in the schools and for improved quality of education in Uganda.

The Centre is indebted to the learners, teachers and consultants from Cambridge Education and The Curriculum Foundation UK, who worked with the NCDC specialist. Great thanks go to members of the Geography Working Group who worked tirelessly to put together the necessary facts and guidance in producing this Syllabus.

Furthermore, NCDC would like to thank the World Bank for the initial technical support and the Government of Uganda for the financial support towards the Lower Secondary Curriculum Review.

Last but not least, NCDC would like to acknowledge all those behind the scenes who formed part of the team that worked hard to finalise the work on this syllabus.

NCDC takes responsibility for any shortcomings that might be identified in this publication and welcomes suggestions for effectively addressing the inadequacies. Such comments and suggestions may be communicated to NCDC through P.O.Box 7002 Kampala or email *admin@ncdc.go.ug* or through our *Contact Us* page on our website at *www.ncdc.go.ug*.

Grace K. Baguma
Director
National Curriculum Development Centre

INTRODUCTION

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, 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 provided for in the Government White Paper on Education (1992) as outlined opposite:

The aims of secondary education in Uganda are:

- Instilling and promoting national unity and an understanding of the social and civic responsibilities;
- Promoting an appreciation and understanding of the cultural heritage of Uganda including its languages;
- Imparting and promoting a sense of self discipline, ethical and spiritual values, personal and collective responsibility and initiative;
- Enabling individuals to acquire and develop knowledge and an understanding of emerging needs of society and the economy;
- Providing 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;
- Enabling individuals to develop basic scientific, technological, technical, agricultural and commercial skills required for self-employment;
- Enabling 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;
- Laying the foundation for further education;
- Enabling the individual to apply acquired skills in solving problems of community, and
- Instilling positive attitudes towards productive work.

BACKGROUND TO THE CURRICULUM

The review 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 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.

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 review 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 programmes 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 review is 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 outlined what the review implies:

"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."

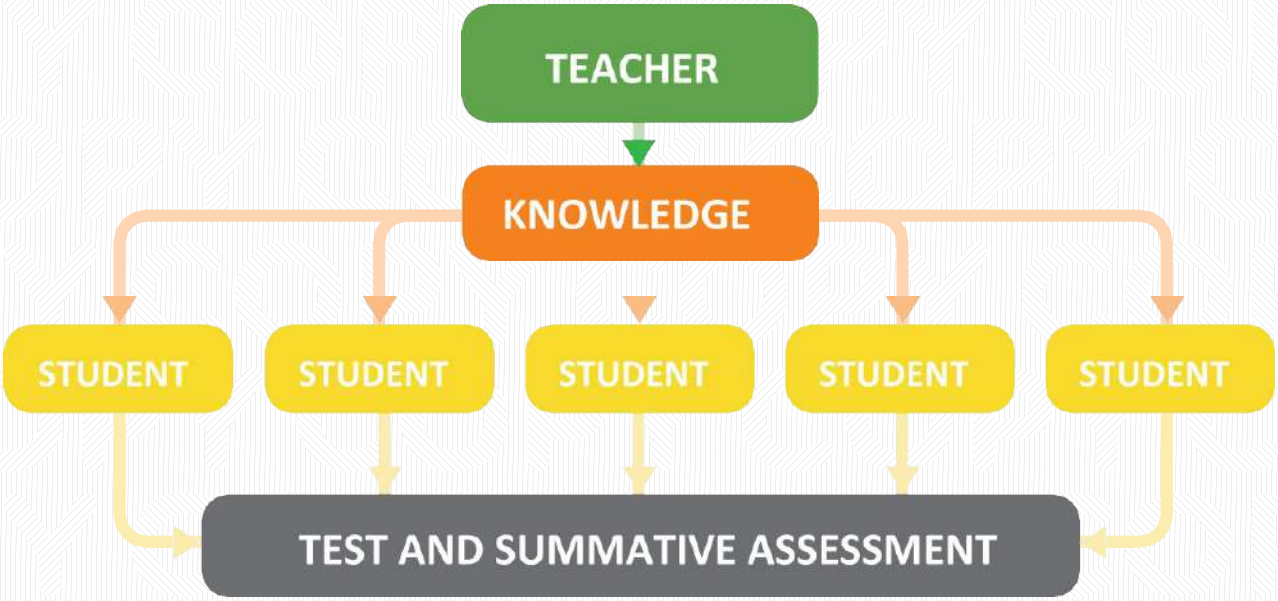
KEY CHANGES IN THE CURRICULUM

The key change in the 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.

THE 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 topic, 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. This curriculum caters for this majority as well as those who later go on to University.

THE COMPETENCE BASED CURRICULUM

In the 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 and summative assessment; not just to give grades but to find out problems the learners may be having and help to solve them.

THE CURRICULUM

This 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

This curriculum sets out 'Key Learning Outcomes' that sum up the expectations of the curriculum as a whole, and sets 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 well-being 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

This 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. The values are derived from The Uganda National Ethics and Values Policy of 2013. They are:

- Respect for humanity and environment
- Honesty; uphold and defend the truth at all times
- Justice and fairness in dealing with others
- Hard work for self-reliance
- Integrity; moral uprightness and sound character
- Creativity and innovativeness
- Social Responsibility
- Social Harmony
- National Unity
- National Consciousness and patriotism

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. The details of the generic skills are:

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 ideas/opinions clearly
- Read accurately and fluently
- Write and present information coherently
- Use a range of media to communicate ideas

Co-operation and Self-Directed Learning

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

Mathematical Computation and ICT Proficiency

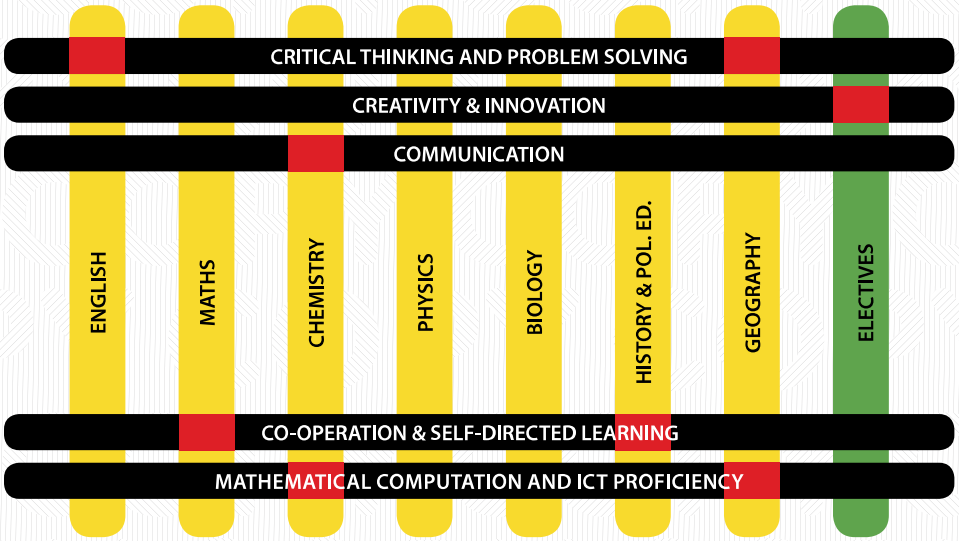
- Use numbers and measurements accurately
- Interpret and interrogate mathematical data
- Use mathematics to justify and support decisions
- Use technology to create, manipulate and process information
- Use technology to collaborate, communicate and refine their work

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 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 Issues

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

The Cross-cutting Issues identified in the curriculum are:

- Environmental awareness
- Health awareness
- Life skills
- Mixed abilities and involvement
- Socio-economic issues
- Citizenship and patriotism

(For details on cross-cutting issues, refer to the Curriculum Framework document, page 11)

Cross-cutting issues have also 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 environmental and health awareness, and to understand the complex and diverse world in which we live.

ICT Integration

ICT is embedded as a learning/teaching tool. ICT integration framework is summarized below and cuts across all the subjects on the curriculum.

CATEGORY OF A TASK IN THE SYLLABUS	ICT APPLICATION (HOW ICT WILL BE INTEGRATED FOR THE TASK CATEGORY)
Field works	Use of cameras to take photos and record videos
Presentations in class	Use presentation application
Key words and meanings	Use online dictionary or search online
Drawing/graphics	Use publishing software, Word processor
Role play, narrations	Use audio and video recordings
Demonstrations	Use audio and video recordings and simulations
Locating and putting marks on an area	Use digital/online mapping
Present findings in graphic and written format	Use desktop publishing software or word processor
Showing data charts	Use spreadsheet software
Group discussions	Mind-mapping software
Search for extra reading materials	Download files on Internet or by sharing
Writing equations and formulas	Use equation editors
Carrying out academic research	Using the Internet and other academic applications like "Encarta", "Britannica" etc.
Sharing or learning with people across the world	Forming learning networks, formation of blogs, social media, emails etc.

THE GEOGRAPHY SYLLABUS

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 degradation and conservation; the use and preservation of water resources; 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, 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	4
		2: Showing the local Area on a map	6
		3: Maps and their Uses	14
		4: Ways of studying Geography	12
Term 2	Introduction to Geography; Introduction to East Africa	5: The Earth and its Movements	12
		6: Weather and Climate	20
		7: Location, Size, and Relief Regions of East Africa	4
Term 3	Introduction to East Africa; World Climates	8: Formation of Major landforms and Drainage in East Africa	26
		9: Climate and Natural Vegetation of East Africa	10
		Total	**108**

SENIOR 2	THEME	TOPIC	DURATION (NUMBER OF PERIODS)
Term 1	World Climates; Mining and Manufacturing in East Africa	10: Climate change in East Africa and the world	8
		11: Major Climatic zones of the World	16
		12: Mining in East Africa	12
Term 2	Mining and Manufacturing in East Africa; Fishing, Wildlife Conservation and Tourism in East Africa	13: Development of Manufacturing industries in East Africa	14
		14: Sustainable use of Fisheries resources in East Africa	12
		15: Wildlife Conservation and Tourism in East Africa	10
Term 3	Population, Urbanisation and Trade in East Africa.	16: Population and Urbanisation in East Africa	20
		17: Transport and Communication in East Africa	16
		Total	**108**

SENIOR 3	THEME	TOPIC	DURATION (NUMBER OF PERIODS)
Term 1	Trade in East Africa; and Trade between East Africa and other parts of the World; Further use of Maps; Introduction to the rest of Africa	18: Trade within and outside East Africa	18
		19: Further skills in Map Reading and Map use	16
		20: Location and size of Africa	2
Term 2	Introduction to the rest of Africa	21: The Relief Regions and Drainage of Africa	16
		22: The Climate and Vegetation of Africa	20
Term 3	Forestry and Irrigation Farming in Africa and other parts of the World	23: Forests, Forest resources and Forestry in Africa	20
		24: Irrigation Farming in Africa and China	16
		Total	**108**

SENIOR 4	THEME	TOPIC	DURATION (NUMBER OF PERIODS)
Term 1	Mining and Industrialisation in Africa and other parts of the World	25: Mineral Resources and Mining in Africa	16
		26: Industrial development in Africa	14
		27: Mining and industrial development in china	6
Term 2	Population and urban development in Africa, and other parts of the World	28: Population and Urbanisation in Africa	22
		29: Population and Urbanisation in china	14
Term 3	Transport, Communication and Trade in Africa; Trade between East Africa and other parts of the World	30: Development of Transport, Communication and Trade in Africa	10
		31: Trade between Africa and the Rest of the World	8
		Total	**90**

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

LEARNING OUTCOMES	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
The knowledge, understanding or skills expected to 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

WHAT IS GEOGRAPHY? WAYS OF STUDYING GEOGRAPHY PHYSICAL ENVIRONMENT: TOPICS 1 –5: 48 PERIODS

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

TOPIC 1: INTRODUCTION — 4 PERIODS

Competency: The learner understands and appreciates 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 (a, v, gs)
	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 on 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 discuss the question 'Whose environment is it?' and jointly compile an 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 — 6 PERIODS

Competency: The learner knows the main physical and human features of the local area and how they 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. draw a sketch map of the school and/or the local area (s) e. use and interpret symbols and identify features on a map using a key (s) f. identify directions on a map using basic compass points (s) g. follow routes on a map (s) h. use the local area maps drawn in (d) 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

14 PERIODS

Competency: The learner knows the main features of a map and understands 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 (s) 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 estimate 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? • Guide learners to understand how a scale does the same thing on a map or photograph. Guide learners to explore the concept of the representative fraction scale, e.g. 1:10 • Challenge learners 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 the 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 types 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. • Using a map with compass directions and through asking for directions between places, guide learners to revise compass from primary school. • Learners draw, the main points of compass. • Explain compass bearings based on degrees of a circle. • Learners do an activity based on compass bearings. **Grids** • Show a map with grid and explain grid: eastings, northings, four and six-figure grid references. • Learners locate places using a map grid. **Types of maps** • Learners explain certain 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 whole world. • Show examples of different types of maps: wall maps, atlases, globes (Physical, political, topographic, road/street, climate, thematic) and ask the learners to explain what each map shows and how it differs from other maps.	

SENIOR 1: TERM Theme: Introduction to Geography

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

12 PERIODS

Competency: The learner understands geography through the use of field work and photographs.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know what field work is (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 findings (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** • Guide learners to discuss ways of finding out about people and places. Learners should consider these ways of studying geography and begin to evaluate their effectiveness: using media; reading research; interpreting maps; analyzing 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 field enquiry, the findings obtained 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. • In their written field work report learners should relate the findings to the topic and objectives of the study; and clearly explain the relationships between the physical environment and human activities in the area studied.

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 the three different angles from which photographs can be taken. • Learners describe the differences between the photographs. • Guide learners to explore the terms used to describe the positions of features on each type of photograph: Foreground, middle ground and background; and left, middle and right to describe where things are on ground and oblique photographs. For vertical aerial photographs you use top and bottom or left and right • Challenge learners to explain why it is useful to draw a sketch to show the area on a photograph. • Demonstrates how to draw a sketch of a photograph. Learners summarise the steps involved. • Learners practice drawing a sketch of a photograph. • *Give learners a topic or area to find relevant photographs on the Internet*	• Observe learners as they explain the differences between the photographs and note how well they relate them to the shapes and appearance of the features. See how well they respect each other's views. • In conversation ask learners to explain why we do not use compass directions while describing positions of features on photographs. • Observe learners as they draw sketches of photographs and see whether they follow the steps logically. • In conversation ask learners to explain why, on a sketch, we do not include all details in the photograph. • Assess learners' sketches to find out how well they represent the photographs from which they are drawn.

SENIOR 1: TERM 2

Theme: Introduction to Geography

TOPIC 5: THE EARTH AND ITS MOVEMENTS

12 PERIODS

Competency: The learner understands the relationship between the Earth and the sun and the effects these have 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, v, gs)
	• Give learners a set of 'True' and 'False' statements about the rotation of the Earth and its orbit around the sun and ask them to 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-four hour and yearly cycle, using models and oral 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 make the comparison.
		• Observe learners as they demonstrate their models and give a verbal explanation of the processes at work.
		• Observe learners' models and drawn diagrams, and their verbal 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.
		• Assess the learners' written work to find out how accurate their calculations are and how logical their explanation is.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Rotation of the Earth • Guide learners to explore that the Earth moves, not the sun –proved by scientists like Copernicus • Using a globe or football, spin 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.*	

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 around the world through north and south poles are longitude; lines going around at right angles to these are largest half way from the poles (the equator) and get smaller towards the poles. • Guide learners to draw a diagram to show how latitudes and longitudes are measured by angles. • Guide learners to identify examples of longitude and latitude of places in Uganda using atlas maps. • Learners 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. **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 15^0 in 1 hour. • Using diagrams, guide learners to understand how time is measured from a line of longitude which passes through Greenwich in London. When it is noon at 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? 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. • *Learners search the Internet to find maps of world time zones.*	

INTRODUCTION TO GEOGRAPHY: INTRODUCTION TO EAST AFRICA TOPICS 6 – 9: 60 PERIODS

SENIOR 1: TERM 2 Theme: Introduction to Geography

TOPIC 6: WEATHER AND CLIMATE 20 PERIODS

Competency: The learner understands 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 the terms used for plotting weather on maps (k) f. know the names and characteristics of the main kinds of clouds and rainfall. (k) g. appreciate that people's lifestyles are influenced by the type of weather and climate (a, v, gs) h. understand the positive and negative effects of weather on their own lives and those of their communities (u) i. draw and use climate graphs of local and other areas to describe climate (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 the chalk board and add any not named. • 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 and 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.*	o Observe learners as they discuss and explain their weather data and how it influences everyday activity. Note how well they cooperate and respect each other's views. o Observe learners' use of appropriate terminology as they record data using instruments and report back. o 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.
	• Learners use examples of maps and weather data to do an exercise on based on iso lines.
	• Guide learners to practice how to record weather on graphs: line graphs for temperature; bar graphs for rainfall.
	• Give a 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.
	
	Clouds and rainfall
	• Through questioning, guide learners to revise the causes of 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 learners go outside and see clouds 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: Challenge learners to explain the different types of rain and what causes rain. 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.
		o Observe learners as they draw weather maps and graphs and note how logically they follow the right steps and how accurately they represent the data given.
		o Converse with the learners and ask them to explain the benefits of representing weather on maps and graphs.
		o In the written reports learners should clearly relate people's lifestyles to the climate of each zone.

SENIOR 1: TERM — Theme: Introduction to East Africa

TOPIC 7: LOCATION, SIZE, AND RELIEF REGIONS OF EAST AFRICA — 4 PERIODS

Competency: The learner knows the countries that make up East Africa; their comparative sizes in area and population; and the main relief regions they are 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, v, 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. • Listen to 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 3 Theme: Introduction to East Africa

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

26 PERIODS

Competency: The learner understands 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 and how each influences landforms (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 relationship between drainage and landforms. (u)
f. recognize the landforms on photographs. (s)
g. locate the examples of landforms on maps of East Africa. (s)
h. appreciate that the rocks, landforms and drainage affect the way people live. (v/a, gs)
i. understand the main concepts of plate tectonics and how this has led to the formation of the main physical features of East Africa (u)
j. understand the characteristics of important kinds of physical features in East Africa, including mountain ranges, volcanoes, plateaus, basins and rift valleys (u)
k. study through field work any of the above physical features in the local area (s)
l. draw a map to show the main relief regions of East Africa (s)
m. 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
	o If possible, show the three types of rock.
	explain that there are three types of rock (Link to work in chemistry):
	• Metamorphic rocks e.g. slate, quartzite, schist
	• Igneous/ volcanic rocks e.g. basalt, granite, pumice
	• Sedimentary rocks e.g. marbel, sandstone, limestone.
	o In groups, learners research how each type is formed. Group findings feedback to whole class discussion.
	o Guide learners to understand the relationship between rocks and the formation of landforms.
	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
m. understand how their own lives and the lives of their communities are affected by physical features, including natural hazards (u) n. understand through case studies how the physical features affect the lives of people in selected areas of East Africa (u) o. 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 (e.g.: The 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. • Learners 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. • Using a diagram, show how the plateau can be warped or sink down slightly in places. • Challenge learners to suggest the possible causes of warping. • Learners suggest where, in East Africa, this has happened most (Lake Victoria basin) **Drainage** • Ask learners what lakes are. In what type of landforms are lakes likely to form? (rift valleys and warped basins 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 a chalkboard map showing main lakes and rivers of East Africa. • Learners copy the map into their books.	

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

	Erosional features
	• In pairs, learners discuss and explain what happens to the soil when it rains heavily.
	• Guide learners to understand that each of the types of landscape they have learnt about can be eroded or washed away.
	• Ask learners what different forces can erode or wash away the land and rocks.
	• Through questioning, guide learners to explore how each of the following erosional forces affects landscape: rain, the sea or lake, ice on high mountains (glaciers)
	• Learners look up erosion and its effects on landscape on Internet
	Erosion by running water
	• Learners 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, learners 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.
	• If possible, learners visit a river or a stream to investigate the stages of a river and main features of river valleys or use diagrams and photographs to guide them to understand these features: 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 related photographs.
	Erosion by lake or sea
	• If possible, learners 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 lake shore come from?
	• Using diagrams and photos, guide learners to understand coastal erosion: cliffs, caves, arches, stacks etc.
	• Using diagrams and questions guide learners to understand coastal deposition: beaches, dunes, spits and bars etc. Learners draw the diagrams in their books.
	Erosion by ice
	• Learners look at photographs showing ice on mountains e.g. Rwenzoris, Mt. Kenya and answer the following questions: What will happen to the rocks and soil when ice moves? Where will moving ice deposit material?
	• Using diagrams and photographs, guide learners to understand to explain glaciations – erosion and deposition.	

SENIOR 1: TERM 3 Theme: Introduction to East Africa

TOPIC 9: CLIMATE AND NATURAL VEGETATION OF EAST AFRICA 10 PERIODS

Competency: The learner understands 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 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
	• Guide learners to 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.
	• Through discussion, learners explore the most common type of rainfall received in East Africa and reasons why this is so: (convectional because most places are hot).
	• Through questioning, guide learners to revise topic 4: Ask when is the northern hemisphere tilted towards the sun? When southern hemisphere is tilted towards the sun? What will be the hottest months in East Africa north of equator; and the hottest months in the places south of the equator?
	• Learners discuss and suggest when most rain occurs; at the hottest or coolest time.
	• In groups or pairs, learners discuss and suggest other factors affecting temperature: height; other factors affecting rainfall: distance from sea or lake.
	Types of climate
	• Show a climate graph for each type of climate, un-named.
	Learners: describe climate from the
		• Learners write their own questions and produce their own 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.
		o Listen to learners responses to the question: Why many people's way of life is less affected by climate today than it was in the past?

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

	graph; answer questions and describe type of climate. (Use two savannah graphs for north and south).
	
	• Show all climatic regions on a wall or Chalk board map. Learners copy the map into their books.
	• Learners use climate graphs to describe the following climates and to answer questions related to the climates:
	  • Equatorial Savannah
	  • Semi-arid
	  • Mountain climates
	  • Coastal (similar to equatorial or savannah but very hot due to being near sea level)
	Vegetation
	• In pairs, learners study photographs of each type of vegetation. They describe the vegetation and suggest the type of climate it comes from. Learners give reasons to support their views in each case.
	Learners look for and describe photographs of each type of vegetation on the Internet
	How people live
	• Show a climate graph for each type of climate, un-named.
	• Explain that traditionally, the way people lived depended mainly on the climate.
	• For each of the photographs used in the previous activity, learners suggest how the climate affects the way people in that area live; the types of farming they do, and give reasons to support their views.
	• Ask why many people's way of life is less affected by the climate these days.
		Note how well learners relate lifestyles to advancement in science, technology and the rising levels of urbanisation.
		
		o Converse with the learners and probe them to clarify and cite examples of how changes in technology have made some communities less dependent on nature, especially climate. Note how well learners can defend their views and also link the previous ways of life to the climate of the area.

WORLD CLIMATES: TOPICS 10 – 11: 24 PERIODS

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

TOPIC 10: CLIMATE CHANGE IN EAST AFRICA AND THE WORLD 8 PERIODS

Competency: The learner understands what climate change is, what causes it and 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 draw diagrams to show the causes of climate change (s) b. understand the possible causes of climate change and how climate change may affect Uganda and the rest of East Africa (u) c. understand the difficulties faced in addressing climate change its effects (u) d. understand possible ways in which local communities and government can reduce the effects of climate change (u) e. use two case studies to examine the possible effects of climate change in other areas of Africa and the world (u) f. form opinions about measures to reduce or mitigate climate change (a) g. participate in tree planting and other activities which might alleviate the effects of climate change in their own communities/school (v, a) h. appreciate the need for people and governments to take actions to reduce the effects of climate change (a, v, gs)	• In groups, learners research the meaning of climate change using different sources and think critically about the definitions before reporting back with the one they have agreed upon. • Challenge the groups to 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. • Learners investigate how some degree of global warming makes this planet habitable – at just the right temperature for us and other life to flourish. • Learners investigate enhanced global warming and its basics 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 to gather the views.	• Listen to learners as they explain the distinction between climate change and human- induced climate change. Evaluate their ability to cooperate and create knowledge and how well they respect each other's opinions. • In conversation look for learners' ability to analyse issues and processes and point out salient contrasts.

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 and actions that might address it. 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. • In groups, 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. • Learners read reports about the effects of climate change on People's lives and ecosystems.. They 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 the available evidence that the climate and the seasons in East Africa are not the same as they used to be. **Causes of climate change** • Guide learners to investigate the available evidence that climates are changing all over the world and how scientists relate this to the fact that we are sending too many greenhouse gases into the atmosphere. • Learners suggest actions by people that cause greenhouse gases to go into the atmosphere and where these gases go. Through brainstorming they investigate why the release of greenhouse gases has increased in the last 100 years. • 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. • Using a diagram and questions guide learners to explore the effect of greenhouse gases in the atmosphere. Compare the atmosphere to a greenhouse. Learners copy the diagram.	• Learners draw a diagram to show what causes climate change and explain this in their own words, using appropriate vocabulary. • Look at the learners' diagrams in and assess their creativity, originality and understanding of climate change.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Effects of climate change and how these can be prevented • Through questioning, guide learners to investigate the main effects of climate change: some places become hotter; some become drier, dry seasons become longer, more rain storms, cyclones or hurricanes and floods. • Challenge learners to explain why climate change is likely to lead to food shortages in some areas. • In groups, learners discuss and suggest how climate change can be prevented or slowed down. • 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. • *Learners look up the Paris agreement or any other agreement on climate change on Internet and summarise main parts of agreement. They find out why these agreements may not effectively reduce climate change.* **What can East Africa do to help prevent climate change?** • In groups, learners discuss whether East Africa gives off many gases which cause climate change, and the main gases we give off. They explain their views. • Ask learners how East Africans can help to reduce greenhouse gases. **Reducing the effects of climate change.** • In groups, learners discuss the following actions and suggest the ones which may be most effective in reducing the effects of climate change: Increasing the use of irrigation during droughts and dry seasons; growing crops more suited to drier seasons; scientists breeding special crops which can grow with less water; planting more trees which absorb carbon dioxide. • In groups learners prepare and maintain a tree nursery bed. They plant the tree seedlings on school land or in the local community, nurture the trees and write a report on the activity.	• In conversation, ask learners to suggest measures that can be taken in their communities to reduce the causes and effects of climate change. • Assess the learners' problem –solving skills as they suggest ways of mitigating climate change and its effects. 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. • Observe learners as they carry out the tree planting project and assess how well they share the responsibilities and apply the skills learnt in Agriculture • In a conversation, ask learners to justify every step they take and assess the relevance of their procedures • In the written project report evaluate how effectively the learners can communicate their experiences

SENIOR 2: TERM 1 — Themes: World Climates

TOPIC 11: MAJOR CLIMATIC ZONES OF THE WORLD — 16 PERIODS

Competency: The learner locates and knows the major climatic zones of the world and understands 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, factors affecting these characteristics and how each type of climate affects the vegetation of the area (u)
c. understand how people's ways of life are influenced by the climate in each region (u)
d. plot the major climatic regions on a world map (s)
e. recognise each type of region on photographs (s)
f. appreciate that people's lifestyles are influenced by the type of weather and climate (a, v, gs)
g. 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, v, gs)
	Factors affecting climates
	• Learners describe climate of the local area including the different seasons.
	• Ask: what factors influence the climate and the seasons in the local area i.e. what causes the climate to be like it is and what causes the different seasons?
	• In groups, learners discuss and suggest how the following factors may affect climate:
	  • distance from the equator
	  • distance from to a lake or water body
	  • height above sea level
	  • relief i.e. flat or hilly land
	  • winds
	  • changes people have made to the vegetation
	• In pairs, or individually learners:
	  • choose any other area of Uganda with a type of different from that of their own locality and:
	  • 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 the factors affecting climate.
		• Ask learners to describe the climate of their home area and explain how it is influenced by the different factors they have learnt about in this topic. Note their ability to express themselves 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 a. Assess their understanding of climatic regions and ability to give logical and coherent explanation of issues.

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

	• Through discussion, guide learners to understand how other aspects of climate are affected mainly by rainfall and temperature e.g., cloud cover, humidity, atmospheric visibility etc.
	Major climatic regions and characteristics
	• Learners use a wall map or a chalk board map to find out the major climates of the world depending on their 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)
	• Ask learners what they can deduce about the differences between each type of climate
	• Through questioning, guide learners to understand the main factors affecting temperature and rainfall: Distance from the equator; distance from the sea and wind direction, respectively.
	• Individually, learners study the map Showing the major types of climate in the world and summarise the information on a table:
	• In groups, learners study photographs of each type of climate and identify the type of climate with reasons.
	• *Learners research the type of climate on the Internet.*
		• Ask learners to produce a table which outlines the types of climate. Observe how well the table provides accurate information about these climates.
		• Evaluate learners' ability to summarise information without losing the major aspects of the situation.

MINING AND MANUFACTURING IN EAST AFRICA TOPICS 12 – 13: 26 PERIODS

SENIOR 2: TERM 1

Theme: Mining and manufacturing in East Africa

TOPIC 12: MINING IN EAST AFRICA — 12 PERIODS

Competency: The learner knows where minerals are found in East Africa, and understands the methods used to extract them, the factors that favour 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 (v, a) j. appreciate that the benefits of mining often go mainly to overseas companies or a local elite only (a, v, 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, v, 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 feedback 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. Pairs feed their ideas into a whole-class discussion. • Ask learners whether all minerals are valuable and the difference between a valuable mineral and other minerals. • Guide learners to understand that although all rocks are made of minerals, 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 ask the learners to look up the map on Internet. • Using the map of the main mining sites, learners work in pairs to make a list for each East African country in four columns: 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 the map and the list they have made show. **Factors affecting mining** • Explain to the learners that not all valuable minerals are worth mining • In groups, learners discuss and suggest factors which may affect whether a mineral is mined or not. • Conduct class feedback from groups and supplement where necessary.	Listen to learners during 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
	Types of mining **Open cast** • Use a photograph and draw a diagram of an open cast mine. Learners use the diagram to describe the mining. • Learners convert the diagram of an open cast mine into a flow diagram showing the stages of mining. • Working in small groups and using the map showing the main mining sites, learners list examples of open cast mining in East Africa. • Learners suggest the advantages and possible dangers of open cast mining; including how this might damage the environment. • Groups compare their ideas with other groups, and then conduct whole-class discussion. **Underground mining** • Using the map showing the main mining sites, learners list minerals mined underground in East Africa. • Use a photograph and draw a diagram of an underground mine (Kilembe copper?) and ask learners to describe the method of mining. • Learners convert the diagram of an underground mine into a flow diagram to show the stages of mining. • Learners suggest the advantages and possible dangers of underground mining; including how this might damage the environment. • Explain why Kilembe underground mine stopped for a long while and task the learners to find out whether it has been re-opened. **Extraction of oil** • Draw a series of diagrams to show the stages in the extraction of oil or ask the learners look this up on Interns. Learners convert the diagrams into a flow diagram to summarise the stages of mining. • Learners suggest possible problems of oil extraction, how this might damage the environment and how the damage can be prevented. • Learners discuss the problems of ownership of land where the oil is found and compensation of the landowners. **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, in East Africa, mining is mainly done by overseas companies. • Ask learners whether local people always benefit from mining and if not, why. • Guide learners to understand that in many countries the mines are owned by overseas companies and they pay taxes to the government. Explain that sometimes taxes are diverted to rich people through 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, since all the money goes to overseas companies or to important members of the government and other rich people. • Learners suggest how corruption can be prevented so that all people can benefit from mining.	

SENIOR 2: TERM 2

Theme: Mining and manufacturing in East Africa

TOPIC 13: DEVELOPMENT OF MANUFACTURING INDUSTRIES IN EAST AFRICA

14 PERIODS

Competency: The learner understands 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. use field work to study a local factory and 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 (v, a, gs) f. appreciate the importance of developing industries to process raw materials exported from East Africa (v, 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 industries: 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 feedback 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 in East Africa and create maps to show their distribution. • Groups present their maps to the class. • Where possible, learners should visit a manufacturing or processing industry and find out what it produces, raw materials, use of labour, capital and ownership.	• Observe whether learners can define and give an example of a manufacturing industry. • Learners produce a map or poster to explain the location of industries; pointing out the type of industry and the factors that influence their location. 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 the flow diagrams and discussion to ensure that learners have understood the types of mining. • Observe learners as they discuss the advantages and problems in developing manufacturing industries in East Africa. Monitor pair discussion, observing depth of their understanding. Use feedback session to further deepen their understanding. 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 that influence 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 on Internet to research manufacturing industry and apply the information to East Africa.
	  • make notes on the factors necessary for the development of industries.
	  • draw a flow diagram to show the processes of industrial development from raw materials to marketing industrial products. (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 favouring the development of industries is important in the development of that industry.
	• Learners work in groups to examine the advantages and problems of developing manufacturing industries and make recommendations as 'experts' to guide the development of industries in Uganda.
	Processing industries
	• Explain that many industries in East Africa are established to process raw materials before they are sold for export.
	• Learners give four examples of processing industries: two for agricultural raw materials and two for minerals.
	• Learners suggest the advantages of exporting processed or manufactured goods rather than raw materials.
	• Through questioning, guide learners to explore the idea of adding value to aproduct.
	• Learners suggest some agricultural products to which farmers can add value.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Industrial / producer goods • Challenge learners to suggest the kinds of materials that are usually imported from overseas when we are constructing 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 • Expand learners' ideas 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 that ensure the development of manufacturing industries benefits the people of the local area? Learners discuss their suggestions in pairs, and then present their ideas to the class. **Consumer goods** • Ask learners to give examples of goods made in Uganda for sale in the local shops. • Ask learners to give examples of goods that we buy from overseas but could be made in Uganda. • Learners explain the advantages of the "Buy Uganda Build Uganda" (BUBU) policy. **Challenges to and Problems of developing manufacturing industries** • Learners discuss the challenges to developing manufacturing industries in East Africa (e.g. capital, power supplies, transport, skilled labour, political instability etc.) • Learners discuss or debate whether we should continue to import second- hand clothes and shoes from overseas. They suggest the advantages and disadvantages of this? • Ask learners what they know about the wages paid to people working in factories: are they adequate for the workers to meet their needs? • Explain the problems that arise from overseas companies, or local companies, paying very low wages to the workers. Learners discuss whether there should be a minimum wage. • Ask learners the kind of places where most 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? • 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?	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• 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 of and others against the industry. 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 activity, 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 further debate on the challenges of developing manufacturing industries in East Africa. Observe how informed their arguments are.	

FISHING, WILDLIFE CONSERVATION AND TOURISM IN EAST AFRICA
TOPICS 14 – 15: 22 PERIODS

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

TOPIC 14: SUSTAINABLE USE OF FISHERIES RESOURCES IN EAST AFRICA

12 PERIODS

Competency: The learner knows 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. know the major fishing areas in East Africa, inland and on the sea (k)
b. understand the main methods of fishing and draw diagrams to illustrate these (u, s)
c. understand the factors that favour fishing in East Africa (u)
d. understand the differences between traditional and modern fishing methods and factors affecting the choice of these methods (u)
e. understand the characteristics, trends, benefits and problems of fishing in a local area
f. understand the dangers of over-fishing and how this can be prevented (u)
g. understand the factors that cause damage to fishing grounds, including pollution and how this can be prevented (u)
h. know some methods of preserving fish (k)
i. understand the methods of farming fish and how they help in conserving fish stocks (u, v)
j. understand the marketing of fish(u)
k. understand the methods of conserving fishing grounds (u, v)
	The fishing grounds of East Africa.
	• Ask learners to name areas where people fish in East Africa. What kind of places are they?
	• Explain two types of fishing areas:
	  • the sea and coast
	  • lakes and rivers.
	• Use wall map, Chalk board sketch map or atlas map to show main fishing areas in East Africa.
	• 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 the types of fish caught, methods used to catch fish, where and how the fish are sold and problems the fishing people face.
	• Guide learners in a discussion about the types of methods used to catch fish or they have observed. Volunteers sketch these on the chalk board and explain each method.
	Learners use artefacts, where possible, and research images of traditional fishing methods.
	• Individually, learners draw annotated diagrams of the equipment used in fishing, 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 fishing 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 of fishing.
		• 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
l. use statistics, graphs and charts to analyse trends of fish stocks and fish catches (s, gs) m. appreciate the dangers facing fishing in East Africa, including over-fishing, poor methods and pollution; and the need for strict laws and enforcement to preserve fish stocks(v, a, gs)	• Learners use Internet to find out information about *fishing in East Africa* • In groups, learners discuss the advantages and disadvantages of each method of fishing and whether traditional or modern methods are best for conserving fish. • Explain dangers of some modern fishing 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 about methods of preserving fish so they can be sent to long distance markets (smoking, salting, sun-drying, canning, refrigeration) **Factors favouring fishing** • In group learners discuss factors which they think will encourage fishing. • Groups present their views to the whole class. Explain and expand group views where necessary. **Benefits of the fishing industry** • In groups, learners discuss and list the benefits the fishing communities and the country can get from fishing. **Problems of the fishing industry** . Learners discuss the dangers to fishing in East Africa e.g.: • over-fishing • catching young fish • pollution of water by human waste and chemicals from farming (fertilizers etc.) and industries etc. **Improvement of fishing** • As a class, learners discuss and suggest how the above problems can be solved. Ask: Which of the suggested solutions are most effective and Why? • Elicit responses and explain with examples where necessary. **Fish farming** • Explain that one way to increase fish production is to farm fish. • Using picture(s) of fish farm, guide learners to explore how fish are farmed and the benefits of fish farming.	

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

TOPIC 15: WILDLIFE CONSERVATION AND TOURISM IN EAST AFRICA 10 PERIODS

Competency: The learner understands the need for conserving wildlife, and the importance of tourism industry.

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

g of, wild life, National Park, game/wild life reserves, ic and prehistoric sites (k)
ctors that influence the development of tourism in est of East Africa (u)
ourism is an important form of trade, the benefits of ssible benefits to young people (u)
a tourist is, why they come and the facilities tourists
urist attractions of East Africa and locations of the (k)
study a tourist attraction or potential tourist attraction s)
tourists around attractions in the local area or any
t tourists to East Africa come from and reasons for
eaning of domestic tourism(u)
s, charts and flow diagrams to represent statistics
ve should preserve wildlife and the challenges facing on in East Africa (u)
ourists are particularly interested in natural scenery (u)
ourism can bring both benefits and problems (v, a)
allenges facing tourism in East Africa and the an be brought by tourism (u)
ed for conserving wildlife (v, a, gs)
ed for ensuring political stability and security if we urism (v, a, gs)
aring for and preserving resources in the local gns of love for one's country (v, a)
n attracting tourists we are always competing with)
	Wildlife conservation
	• In pairs, with the word "wildlife" on the chalkboard, 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)
	• Pairs contribute their ideas to a whole- class discussion.
	• Ask: What might be the consequences of failing to conserve wildlife?
	• Learners recognise some threats to wildlife and suggest ways to conserve wild life in East Africa.
	• In pairs, with the word "tourist" on the chalk board, learners decide on a definition of the word. Then pairs tell the class their definition.
	• Guide learners in a discussion about the connection between wildlife and tourists.
	• 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?
	• Working in small groups, learners discuss the following:
	  • Are all people who come to East Africa tourists?
	  • What other kinds of people come to East Africa? (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.
	• Ask: 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.
	• 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
		• 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 the 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
	animals, beaches and sea etc.) • Learners suggest other kinds of areas which attract tourists (historic and pre-historic sites; religious places etc.) 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: what things in the area are or might be good for tourists; What activities might tourists be encouraged to do; How the people of the area could encourage tourists to come. • Learners use their findings to plan a day's activity as though they were a tourist 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 draw graphs and analyse them to show tourist arrivals and origins. They could map the statistics if relevant software is available. • Explain that most tourists to East Africa 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. **Why is East Africa popular for tourists?** • Use a 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/national parks and wild life/game reserves, coastlines, mountain scenery and rivers and lakes in Africa • Ask: what else attracts tourists? Well-developed facilities: hotels, lodges, roads, tourist transport companies and sports grounds. **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 Masindi (political instability e.g. Al Shabab: rumours of political trouble e.g. during elections or between different ethnic groups/tribes)	

POPULATION, URBANISATION AND TRADE IN EAST AFRICA
TOPICS 16 – 18: 54 PERIODS

SENIOR 2: TERM 3

Theme: Population, Urbanisation and Trade in East Africa; and Trade between East Africa and other parts of the World

TOPIC 16: POPULATION AND URBANISATION IN EAST AFRICA — 20 PERIODS

Competency: The learner understands and appreciates 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 and the location of the main urban centres of East Africa (k)
c. use maps, statistics, graphs and diagrams to analyse population (s)
d. understand the demographic transition model and how this relates to the historical growth and population structures of East Africa (u)
e. understand the relationship between population, resources and the provision of services (u)
f. understand the factors which have led to rapid population increase in Uganda and the rest of East Africa (u)
g. understand the relationship between a rapidly growing population and urbanisation (u)
h. understand Kampala city as an example of rapid urbanisation and the advantages, disadvantages and problems resulting from urbanisation (u)
i. understand the concept of urbanisation, the factors influencing urbanisation, and the functions of urban areas (u)
j. appreciate the implications of urbanization for development (v, a)
k. use statistics and photographs to illustrate urbanisation and its problems (s)
l. understand the methods which can be used to control the rate of population growth (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, chalkboard 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.
	• Work in pairs, learners 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 explain the reasons for the density of each area and describe the results of the high or low density. Pairs feedback to whole class.
	• With the help of learners 'answers from last task, learners work in groups to explain factors affecting density of population in East Africa. Put the following words on the chalkboard as prompts:
	  • climate, especially rainfall
	  • soils
	  • relief
	  • diseases
	  • type of farming
	  • resources including minerals
	  • urbanization
		• 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 of overcoming those problems.
		• Monitor the groups and contribute if they need prompting, and clear up any misunderstanding. In whole-class feedback, note if learners ask relevant questions or extend the 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
m. appreciate the need for, and use of population control methods (v, a, gs) n. appreciate the social and cultural problems of slowing down population growth (v, a, gs) o. appreciate the implications of urbanisation for development (v, a, gs)	• Groups nominate a speaker and speakers feed their group's ideas to the whole class. • In groups, learners discuss problems of high population densities in rural areas e.g. shortage of land, land fragmentation, lack of fallow period • Groups nominate a different speaker and speakers feed their group's ideas to the whole class. • Explain and supplement group ideas where necessary. **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. **Rural-urban drift and urbanization** • Learners use internet to find the population of some urban areas e.g. Kampala, Nairobi in 1960, 1980, 2000, 2010, 2015 • Learners draw line or bar graphs to show the statistics. • Using the graphs they have drawn, learners analyse and explain the growth of both cities. • Learners discuss reasons for rural-urban drift: pull factors and push factors • Explain the structure of urban areas: residential, commercial, and industrial; high income, and low-income residential areas. • Learners relate this structure to any urban area in Uganda they know. • In groups, learners discuss the problems related to rapid growth of urban areas. Groups feedback to whole class and explain their views using examples from any urban area they know. **Solving the problems of big cities** • Ask learners to discuss, using examples of Kampala or other East African city all the above problems and suggest possible solutions. • Learners work in groups to create a model city of the future and explain its features.	• 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 as they use their maps and graphs to compare and contrast Nairobi 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. Assess originality of ideas and how well they defend their views.

SENIOR 2: TERM 3

Theme: Population, Urbanisation and Trade in East Africa; and Trade between East Africa and other parts of the World

TOPIC 17: TRANSPORT AND COMMUNICATION IN EAST AFRICA — 16 PERIODS

Competency: The learner appreciates the major types of transport and communication in East Africa, factors influencing their development and the role of transport and communication 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 in East Africa(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. appreciate the importance of transport in national and regional development (v, a, gs)	**Types of transport** • Ask learners how people used to move and transported goods traditionally. • Ask: What sort of people still use human or animal means of transport and why? • Working in pairs, 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 the different types of transport (human, animal, road, railway, water, air) in terms of speed, cost, and ability to carry goods including bulk goods. • Guide learners to discuss the table they have drawn 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. • Guide learners to discuss how the development of transport is affected by economic development and production of goods, population, capital and markets. • Learners discuss how the development of transport e.g. roads and railways, affects economic development. • Explain the transportation of oil by pipeline and learners suggest the advantages and disadvantages of different routes to transport oil from Uganda. • Working in pairs, learners talk about the different types of transport in their local area and how they have benefited 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 the 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 pointed out. Note how relevant their ideas are. • Ask learners to compare ways of communicating with people in other areas or places with the ways their grandparents used to communicate. Observe the 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, the extent to which these forms are still used and the advantages they have. • Ask learners to describe the 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 the means of communication they have described. • Guide learners to explore the main forms of communication that were used before the development of digital communication by mobile phone and Internet (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 3: TERM 1

Theme: Population, Urbanisation and Trade in East Africa; and Trade between East Africa and other Parts of the World

TOPIC 18: TRADE WITHIN AND OUTSIDE EAST AFRICA — 18 PERIODS

Competency: The learner knows 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. use field work to 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, their destination and origins (k)
d. understand the importance of trade in the development of a country (u)
e. know the types of trade including barter, visible trade, and invisible trade (k)
f. understand the meaning and importance of a favourable balance of trade and difficulties of an unfavourable balance of trade (u)
g. understand the historical problems that affect trade in East Africa (u)
h. understand the ways of overcoming the problems that affect trade in East Africa (u)
i. understand why there is limited trade between East African countries (u)
j. understand ways of encouraging trade between East African countries and with other African countries (u)
k. use flow charts, statistics and maps to show trade patterns (s)
l. appreciate the advantages of processing products to add value to exports (v, a, gs)
m. appreciate the advantages of developing import substitution industries (v, a, gs)
n. appreciate the need for an economic system which helps to distribute the resources in an equitable way (v, a, gs)
	Types of trade in East Africa
	• In groups, learners go and study a local market, using questionnaires and other methods. They find out the goods sold, the sources of the goods, who the buyers are, 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. Learners list the main goods sold from that area. Learners find answers to the following questions:
	  • Which of the goods from the area are sold within Uganda and which ones are exported?
	  • Which are the main goods the local people buy?
	  • Which goods come from Uganda and which ones are imported from overseas?
	  • Do you think the volume of the goods from the area which are exported overseas is more or less than the volume of goods imported?
	  • If more goods are imported than exported, what difficulty might this cause?
	• Provide a table or learners find out on the Internet, statistics of the imports and exports of Uganda or any other country of East Africa. Using the statistics, learners answer the following questions:
	  • Are most goods exported raw materials or manufactured goods?
	  • What about most goods imported?
	  • What kind of goods is 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 trade established as a result of their fieldwork investigation.
		• In conversation, ask learners to suggest how we can 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 signing free trade agreements with countries outside Africa. In conversation, assess the reasons for their answers.
		• Learners produce a report which explains the relative success of goods sold within Uganda – that have not been exported.
		In conversation, ask learners to explain what they think might be the challenges associated with this kind of trade.
		Note their understanding of local trade and how well they communicate their ideas.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• Through questioning, guide learners to find out the dangers of importing more goods and services than we export; including the idea of unfavourable balance of payments. • Ask: How can we get foreign money/ foreign exchange for buying goods from overseas if we do not export goods and services? • 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 how this came about and how it affects the East African countries. • 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 and packed in tins, or fruits made into juice. • 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 in East Africa is to abolish custom duties, but then the 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 USE OF MAPS; INTRODUCTION TO THE REST OF AFRICA

TOPICS 19 – 22: 54 PERIODS

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

TOPIC 19: FURTHER SKILLS IN MAP READING AND MAP USE 16 PERIODS

Competency: The learner uses large scale maps or 'survey' maps to find out 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, gs) h. appreciate the usefulness of survey maps in studying Geography (v, a, gs)	**Using contours** • Explain that a contour is a line along which all places are of 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 different on contours. Explain that on gentle slopes contours are close together while on a steep slope they are far apart. • Guide learners to explore how contours are numbered. • Use a place with a small valley, hill and spur. Or use a sand tray to show contours. • 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 a contour map. • Use a very simple contour map showing steep and gentle slopes, valley, hill, spur, flat land and other relief features and ask questions to help learners to recognise the features. **Describing an area from a survey map** • Using survey maps, guide learners to describe relief, drainage, vegetation, farming, settlement, transport and other human activities in an area. Ask questions to guide learners to relate human features to physical features and to each other. • Working in pairs, learners practise using sketch maps to show certain areas 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** • Using a survey map, demonstrate drawing a cross section. • Learners practice drawing cross sections from survey maps. • Learners mark human features along the 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 their drawings. • Compare hand-drawn landscape profiles with those that can be drawn digitally e.g. using Google Earth.	• 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 of the features are. • Give learners exercises on drawing cross sections of physical features. They should mark features on their drawings and relate them to height. Observe the accuracy of their work. • Observe learners as they use maps to explain features in the landscape and patterns of development. Note how well they use the right terminology relating to physical and human landscape.

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

TOPIC 20: LOCATION AND SIZE OF AFRICA 2 PERIODS

Competency: The learner knows 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)	**Location and size** • Using 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. Learners compare the size of Africa on 2D maps 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.* • Using a wall map and atlas maps of Africa or Internet maps, ask learners to describe the position of East Africa within Africa and the comparative size of East Africa. • Learners draw a sketch map showing the location of Africa.	• 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 the extent to which the learners' essay reflects the key issues learnt from this topic.

SENIOR 3: TERM 2 Theme: Further use of maps; introduction to the rest of Africa TOPIC 21: THE RELIEF REGIONS AND DRAINAGE OF AFRICA 16 PERIODS

Competency: The learner knows the relief regions of Africa, the major landforms and drainage and understands how they were formed and the effects of the relief and drainage 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 physical features in Africa and East Africa, including mountain ranges, plateaus, basins and rift valleys (u) e. understand the main concept of plate tectonics and how it has led to the formation of the main physical features of Africa and East Africa (u) f. use a sketch map to show the major relief regions, rivers and lakes in Africa(s) g. understand how different landforms affect the lives of people (u) h. appreciate that many areas contain very old rocks that are not very good for soil formation but rich in minerals (v, a, gs) i. understand the effects of the landforms on development, including agriculture and mining (u) j. understand the importance of rivers and lakes to development (u) k. appreciate that rivers and lakes can be useful but can as also be spoilt by pollution (v, a, gs) l. understand how their own lives and the lives of their communities are affected by physical features, including natural hazards (u) m. understand through case studies how the physical features affect the lives of people in selected areas of East Africa (u) n. use field work to study any of the above physical features in the local area (s) o. understand how water resources are used and controlled (u)	**Relief regions** • Learners work in groups to research and create their own 2D or 3D maps, adding features as they learn about them. • Using a wall map and atlas map or Internet map showing the relief of Africa and images, including aerial images, ask learners to locate and describe the position of the main mountain areas of Africa. • Ask learners which kind of relief occupies the largest area in other parts of Africa: plateaus or coastal plains. • Explain that, apart from high mountains, most of Africa contains plateaus with small areas of coastal plains. **Formation of landforms** • Through questioning, guide learners to 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 the volcanoes of East Africa), block mountains (Rwenzoris) or folded mountains (Atlas) • Learners look up Drakensburg and Atlas Mountains on Internet or in textbooks and make notes about their origins and age. • Challenge learners to explain the difference between the origin of the Drakensburg and Mountain Elgon or Mountain Kilimanjaro. • Use modeling techniques and diagrams to assist learners to understand folded mountains: Atlas Mountains. • Explain that much 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).	• Observe learners as they use their maps to discuss the advantages of Africa's landforms and relief features for the development of Africa and make connections. (They 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 learners as they discuss the findings of their fieldwork and interpret their local area. Note how well they express themselves and respect divergent views.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• Explain that old rocks do contain many minerals e.g. copper, gold, uranium so there are many mining areas in Africa • Guide learners to explore 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** • Guide learners to 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 in the area, explaining connections between the two.	

SENIOR 3: TERM 2 Theme: Further use of maps; introduction to the rest of Africa

TOPIC 22: THE CLIMATE AND VEGETATION OF AFRICA 20 PERIODS

Competency: The learner understands the distribution of climates in Africa, the reasons for the distribution and the effects 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 (v, 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. draw a map showing the climates and vegetation of East Africa (s) g. draw climate graphs of local and other areas and describe climates using these graphs (s) h. appreciate that the traditional way of life and farming of all people of Africa is strongly influenced by the climates (a, gs) i. appreciate that modern technologies and urbanisation have made people less dependent on the climate. (v, a, gs) j. Understand through fieldwork the characteristics of vegetation and how the vegetation is affected by the climates (u, s) k. appreciate the dangers of the overuse of the natural vegetation (v, a, gs) l. appreciate the need to love and care for their local area, community and country by replanting the vegetation in areas where it has been cleared(v, a)	**Factors affecting the climates of Africa** • Though questioning, guide learners to revise the seasons and apparent movement of the sun. 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. • Revise: ask what will happen to air when the sun is overhead and what this will cause? (Air will rise, causing convectional rain) • Through questioning guide learners to explore how the rising air causes winds to blow from north and south towards the rising air. Show the diagram and map of the winds caused by this situation: north east trades and south east trades. Guide learners to understand 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 on climate. • Through questioning, guide learners to explore the relationship between the overhead sun, ICTZ, wind movement and rainfall pattern in Africa. • Challenge learners to explain how this relationship affects different climates: equatorial and savannah. • Explain that places outside the tropics have different kinds of climate not affected by the ITCZ.	• Observe learners as they use maps and diagrams to explain the distribution of climate patterns across the African continent, accounting for the differences between the climates 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 climatic challenges people face, and give examples (including the effects of climate change), • Assess their written work to check for understanding and effective communication.

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

m. understand the main characteristics of the climates and how each affects the vegetation of the area (u)
n. 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 a sketch map showing these climates in Africa
	• Using the graphs drawn and facts about ICTZ, learners explain the main climates:
	  • *equatorial.*
	  • *savannah*
	  • *desert*
	  • *Mediterranean*
	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 characteristics of each.
	• Learners investigate the effects of climate on livelihoods through local scale case studies, and compare the case studies in order to identify some key positive and negative effects of climate.
	
	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 the above climatic regions (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.	

FORESTRY AND IRRIGATION IN AFRICA AND OTHER PARTS OF THE WORLD
TOPICS 23– 24: 36 PERIODS

SENIOR 3: TERM 3

Theme: Forestry and irrigation in Africa and other parts of the world

TOPIC 23: FORESTS, FOREST RESOURCES AND FORESTRY IN AFRICA — 20 PERIODS

Competency: The learner understands the importance and uses of forest resources in Africa and why they should be preserved.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know where the main forest resources in Africa are and their main uses (k) b. draw maps to show the areas of the case studies on forestry and graphs to illustrate their climates (s) c. understand the location and reasons for location of the forest resources in Africa (u) d. know the characteristics of the forests in Africa (K) e. understand the importance of forests in terms of the environment (u) f. understand factors that favour the development of a hardwoods industry (u) g. understand the methods of harvesting trees from the forest (u) h. understand the development of the hardwood trade in Gabon (u) i. recognise from photographs the characteristics of forests and activities related to logging in Gabon (s) j. use simple graphs, charts and diagrams to present and analyse statistics on the timber industry in Gabon (s, gs) k. draw a map showing the major forested areas and timber processing areas in Gabon (s) l. appreciate the dangers of unsustainable forestry in Africa and the dangers of destroying forests (v, a, gs) m. appreciate the dangers of overuse of the natural vegetation (v, gs) n. understand the effects of human activities on the environment (u) o. draw diagrams and flow diagrams to show stages in logging (s p. appreciate the need to preserve the natural environment (v/a, gs) q. appreciate the dangers of overuse of natural resources: deforestation and over-fishing (v/a, gs)	**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 draw and use maps to show this information. • Ask learners to use their maps to explain the location and types of forests in Africa and link these two aspects 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 the importance of forests in preserving the environment (preserving, binding and forming soils; absorbing rain fall and giving off water vapour through transpiration, creating rainfall). • 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 the 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).	• Evaluate the case studies to see how well learners have understood the problems of and solutions to deforestation. • Use learners' summaries to evaluate how well they have understood the conflict between development and conservation or preservation of the environment. • Observe learners as they present their reports and give reasons for their views. Note how well they communicate orally, collaborate and defend their views.

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, discuss their ideas and agree on how to improve them. • Ask learners why it is better to process the timber and make things in Africa, rather than selling it directly overseas. What can be made? What are the difficulties in processing timber? (furniture industry, building, paper; the main difficulty is inadequate capital) **Destruction of forests in Africa** • Learners work in groups to research deforestation in Africa using the Internet or textbooks. They use this research and class discussions to help them assume the role of the Minister responsible for 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 the dangers of cutting down too much forest cover. What are the difficulties of controlling deforestation? • Ask learners how this can be controlled and how we can replace the forests (e.g. use strict laws, prevent corruption, replant forests, and have laws that one must replace every tree they cut.) • Through questioning assist learners to explore why re-planting forests only works partially (the planted forest does not contain the same variety of species as the natural forest and hard wood takes a long period of time to grow).	

SENIOR 3: TERM 3 **Theme: Forestry and irrigation in Africa and Other parts of the World**

TOPIC 24: IRRIGATION FARMING IN AFRICA — 16 PERIODS

Competency: The learner understands 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) 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 and some examples of irrigation schemes (k) e. know one example of a large-scale irrigation scheme in Africa(k) f. understand why irrigation is becoming increasingly important in Africa (u) g. understand the factors leading to the development of the Gezira scheme (u) h. understand how the Gezira scheme works, its benefits and difficulties (u) i. use statistics and other information to analyse different aspects of the Gezira scheme (s, gs) j. appreciate the advantages of government cooperation with small scale farmers (v, a, gs) k. appreciate the dangers of corruption in government schemes (v, 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 cooperation between government and smallholders. • Ask learners to suggest the advantages of cooperation between government and local farmers. • Through discussion and questioning guide learners to understand 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. • Observe learners as they explain their recommendations for methods of irrigation suitable for Uganda, using evidence from their research and class discussions. • In conversation, ask learners to justify their recommendations. Note their understanding of the suitability and cost-effectiveness of the methods of irrigation; and how well they defend their opinions.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
l. know the areas of China where irrigation is important and the main crops grown on irrigated farms (k) m. draw maps to show areas of the case studies, and graphs to illustrate their climates. (s) n. understand reasons for the importance of irrigation in China (u) o. understand the main methods of irrigation used in China (u) p. understand the principles and use of hydroponics (u) q. recognize and describe irrigation farming in China from photographs (s) r. appreciate the importance of rice growing and irrigation in China (v, a, gs) s. appreciate the lessons Uganda can learn from rice growing and the Gezira irrigation scheme (v, a, gs)	**Irrigation Farming in China** **The Climate of China** • Using a wall map, globe, and atlas show the position of China and ask learners to describe its position. Build up a description of location through learner responses. • Using a map showing annual rainfall, ask learners to point out the wet areas, drier areas and very dry areas. • Show a 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. • Using a chalkboard sketch showing in-blowing winds in summer, out-blowing winds in winter, briefly explain the monsoon; as the reversal of wind movement. • Ask learners which season will be wet, and which one will be dry. (Wet summers with in-blowing winds; dry winters without- blowing winds.) • Guide learners to understand how and why the amount of rainfall depends on the distance from the sea. • Summarise the regions: wet coastal plains, drier inland, Very dry in west, Cold in mountains. • Learners collaborate to produce a "weather forecast" for a given region, using maps and charts and present it to the rest of the class. • Challenge learners to use the knowledge they have so far got about the climate of China to explain why irrigation is important in the country (monsoon climate with dry season; very dry areas inland away from coast). • Elicit from learners the main crop grown in China (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 (from land preparation to drying the seeds). • Learners research using Internet or textbooks to locate key areas of rice growing in China and create their own sketch maps.	

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	They research some facts and images about the rice growing process at different locations. Ask learners why rice is called a labor-intensive crop. • Though questioning, guide learners to explore other problems associated with rice growing in China. • Explain how hydroponics is used for growing rice in China. • Explain other crops grown in China e.g. wheat and corn in the drier areas. • Learners compare the methods of irrigation used on the Gezira Plains and in China and suggest the one which is most suitable for Uganda. Probe learners to give reasons for their suggestions.	

MINING AND INDUSTRIALISATION IN AFRICA; AND OTHER PARTS OF THE WORLD — TOPICS 25 – 27: 36 PERIODS

SENIOR 4: TERM 1 — **Theme: Mining and industrialisation in Africa; and Other parts of the world**

TOPIC 25: MINERAL RESOURCES AND MINING IN AFRICA — 16 PERIODS

Competency: The learner knows the main mineral resources in Africa; understands how minerals can contribute to the development of African countries.

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. recognise types and consequences of mining from photographs (s) c. appreciate the positive and negative contribution of mineral resources to development (v, a, gs) d. understand why most mining is capital-intensive (u) e. understand why much of the mining in Africa is controlled by overseas companies (u) f. draw a map to show the main mining areas of Africa (s) g. draw diagrams to show the main methods of mining (s) h. appreciate the dangers that most people may not benefit from mining in the countries where it takes place (v, 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 to summarise countries with minerals and the minerals in each country. (Use the most important mining areas only, not an exhaustive list). • Revision: Using their knowledge about mining in East Africa (topic 15), learners draw diagrams to show the three main methods of mining: open cast, underground and oil extraction. They make a list of the problems of each method. • Learners annotate photographs of mining, identifying the process in each 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 the Niger delta) • *Learners look up one of the above case study areas on the Internet.* **Economic benefits of mining** • Ask learners to suggest the possible economic benefits of mining to the 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 ensure that most people in a country benefit from mining.	• Observe as learners hold a discussion on whether mining has benefited Africa or not. • Learners use photographs and their research to explain the impacts of mining on the environments and give reasons, with evidence. (Include a photograph of pollution by an oil mine 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 the winners and losers might be. • Observe groups as they discuss and make suggestions and recommendations aimed at ensuring that mining benefits everyone. Note how well they collaborate, respect views at variance, originality of their ideas and problem-solving skills.

SENIOR 4: TERM 1 — Theme: Mining and industrialisation in Africa; and Other parts of the world

TOPIC 26: INDUSTRIAL DEVELOPMENT IN AFRICA — 14 PERIODS

Competency: The learner understands the economic importance and difficulties of industrial development in Africa and knows the main types of industries that 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 that influence 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 it works and its effects on the environment (s) f. appreciate the contribution of manufacturing industries in transforming primary products (a, v, gs) 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 (v, 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; and 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 industries). • 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 of the factory on the people, the environment and economy and to explain how they feel about it. • Using a map, guide learners to find out examples of major 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 sketch maps or digitally sourced maps:	• Evaluate learners' case studies to see how much their prior learning has been consolidated. • Observe groups as they discuss the advantages of African countries establishing manufacturing industries. Assess learners' level of collaboration and understanding of the importance of manufacturing industries. • 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			

- For each area, learners explain the main industries and their ownership.
- *Learners use Internet to help them compile the above table.*
- Working in groups, learners discuss the advantages of African countries establishing manufacturing industries. Groups feed their ideas into a class discussion.

SENIOR 4: TERM 1 Theme: Mining and industrialisation in Africa; and Other parts of the world

TOPIC 27: MINING AND INDUSTRIAL DEVELOPMENT IN CHINA 6 PERIODS

Competency: The learner understands why and how industries developed in China, the industries which developed, and how they have evolved.

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 industrial development (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 (v, a, gs)	**Minerals and mining in China** • Use a wall map, atlas map or Internet map to show the location of the main minerals in China. 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 the development. They investigate current news stories to search for information about Chinese investment in Uganda. • Ask learners the kinds of products from China that are sold in Uganda. (Cheap consumer goods, textiles, plastics;, Electronic goods especially mobile phones and computers). • Explain the industries developed in China and changes in these: starting with heavy industries (iron and steel.); consumer goods industries based on cheap labour; changes to more advanced technological industries as wages increased. • In pairs or groups, learners discuss and suggest the advantages for the development of industries China has: 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 the Chinese good at these projects? (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. • In conversation, probe learners to clarify their ideas and defend their opinions about the potential for developing manufacturing industries in African countries. • 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 AND OTHER PRTS OF THE WORLD TOPICS: 28 – 29: 36 PERIODS

SENIOR 4: TERM 2 Theme: Population and urban development in Africa and Other parts of the world

TOPIC 28: POPULATION AND URBANISATION IN AFRICA — 22 PERIODS

Competency: The learner understands the growth rates and distribution of population in Africa, reasons for rapid urbanisation and its consequences.

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(u)
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 the 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 the factors that influence the distribution (u)
h. understand why the population of some countries is growing faster than others (u)
i. appreciate the advantages and problems of having a large or rapidly increasing population in a country (v, a, gs)
k. understand the methods which can be used to control the rate of population growth (u)
l. appreciate the need for, and use of population control methods (v, a, gs)
m. use statistics and graphs to show rapid urban development (s)
n. understand rural-urban migration and the reasons for this type of migration(u)
	Population growth
	• Revision by questioning: Ask learners to explain birth and death rates, and how these rates affect population growth.
	• Using the statistics of Africa's population about every 10 years from 1900 to date, ask learners to describe the growth of population over the period.
	• Learners use the Internet to find the above figures.
	• Learners suggest reasons for the rapid growth of population in Africa E.g.:
	  • high fertility rate
	  • high birth rate
	  • early marriage .
	Distribution of population
	• Using a map showing the distribution population in Africa, ask learners to identify the main areas of high density (over 40 persons per sq. km.), moderate density (10 – 40 people per sq. km.) and low density (less than 10 persons per sq. km.) and suggest reasons for these densities.
	• Learners work in groups to discuss and list the factors which affect the density of population in Africa.
	• Explain and expand the learners' views where necessary.
		• Eliciting as much information as possible from learners, evaluate how well they can recall prior learning.
		• Monitor group discussion and prompt learners where necessary. Note how well they communicate orally.
		• 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. Note the feasibility of the solutions they suggest.

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

o. understand the rapid growth of urban areas, problems facing urban areas and the effects of urbanisation on the environment (u)
p. draw maps to show the main areas of high density of population and main urban areas of Africa (s)
q. appreciate the need for planning urban areas and urban growth (v, a, gs)
r. understand the relationship between a rapidly growing population and urbanisation (u)
	Problems caused by rapid population increase
	• Learners look up population growth on the 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 on whether African countries should try to reduce the high rate of population growth, giving reasons.
	• Ask learners how the rate of population growth can be reduced and whether they agree with the following 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 their characteristics.
	• Learners discuss the causes of rural-urban drift.
	• Learners discuss and list the problems caused by rapid urban growth: revision of topic 21.
	• Learners discuss the need for planning urban areas.
	• Learners look up Lagos on Internet
	• Guide learners to carry out a case study of an urban area in Africa: Lagos or similar area, emphasising growing inequality and social problems caused.
	• Learners discuss how the problems of urban areas can be solved or alleviated.	

SENIOR 4: TERM 2

Theme: Population and urban development in Africa, and Other parts of the World

TOPIC 29: POPULATION AND URBANISATION IN CHINA — 14 PERIODS

Competency: The learner understands the size of China's population, the history of its growth rate, the one-child population policy and its impacts on the country's population growth and development.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a. know the total population of China and the changes in her population growth rate (k) b. know the number and size of some urban areas in China (k) c. understand the size and rapid growth of China's population and reasons for this (u) d. understand the reasons for the adoption of the one child policy in China (u) e. understand the consequences of the one child policy and changes in it (u) f. understand the reasons that lead to rural-urban drift and growth of urban areas in China (u) g. understand the growth of Shanghai as a major city (u) h. understand government control over the growth of urban areas (u) i. use maps, statistics, graphs and diagrams to analyse population (s, gs) j. draw a map to show the major urban areas of China (s) k. understand the methods which can be used to control the rate of population growth (u) l. appreciate the advantages and disadvantages of the one child policy(v, a) m. appreciate the advantages and problems of having a large or rapidly increasing population in a country (v, a) n. appreciate the need for, and use of population control methods (v, 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. • Using a table or graph of China's population from about 1900 to the present, ask learners to describe the growth of population during the 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. Learners compare these reasons and trend 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. • Through discussion, guide learners to understand the one-child policy and its effect on population 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. • Through questioning, guide learners to explore the reasons for the change to the 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. • Observe learners as they discuss and evaluate how well the express their views, and respects each other's opinions.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	Urban areas in China • Show a table of number and size of urban areas in China with large populations. • Learners suggest reasons for the increasing size of urban areas based on topic 30 on industrialisation. • Explain the policies used to control 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. • In groups, learners discuss whether this policy would be good in Africa, including Uganda. • Learners locate Shanghai on the map of China. • Learners suggest why Shanghai has become a big city. • In pairs or groups, learners suggest the reasons that led to the growth of Shanghai as a big city. Expand their ideas and point out China's original growth as a European enclave like Hong Kong.	

TRANSPORT, COMMUNICATION AND TRADE IN AFRICA; TRADE BETWEEN AFRICA AND EUROPEAN UNION; TRADE BETWEEN AFRICA AND ASIA: TOPICS 30 – 31: 18 PERIODS

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

TOPIC 30: DEVELOPMENT OF TRANSPORT, COMMUNICATION AND TRADE IN AFRICA

10 PERIODS

Competency: The learner understands the main forms of transport and communication and 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, gs)
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. appreciate the importance of transport in national and regional development (v, 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. appreciate the advantages, disadvantages and uses of the main forms of inter- African transport (v, 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 trade patterns of the selected countries and the factors influencing them (u)
n. understand the contributions of trade to the development of the selected countries (s)
	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 importantones.)
	• In pairs, learners make a table from the map, showing type of transport, the places it links, and countries linked.
	• Learners suggest reasons for this pattern of transport:
	  • transport developed by colonial powers which were 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 African countries produce the same kinds of goods, so there is no need for trade with one another.
	• Through discussion, assist learners to explore the physical problems that affect transport in Africa e.g. in 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
		• 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
o. use flow charts, statistics and maps to show trade patterns (s) p. understand the main forms of international communications (u) q. understand how the Internet has transformed international communication (u) r. use statistics flow charts, maps and graphs to analyse trade in African countries (s, gs) s. appreciate the importance of promoting inter African transport and communication to promote African unity and trade (v, a, gs)	Africa. **The role of China in developing African transport** • Learners use the Internet to look up: China: building railways in Africa. • Refer back to Chinese investment in large-scale projects in Africa (topic 3o). • 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 challenge learners to draw a suitable graph or diagram to represent the statistical information. Learners use the graph or diagram they have drawn to comment on the trade. • 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 31: TRADE BETWEEN EUROPE AND AFRICA; ASIA AND AFRICA

8 PERIODS

Competency: The learner knows the main forms of trade between Europe, and Africa and the advantages and disadvantages for both; 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, and Africa (k) b. know the trade between Asia 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 Asia (a) g. analyse the trade statistics between the European Union and African countries and Asia and Africa (s) h. appreciate the difficulties of negotiating trade agreements (v, a, gs)	**Trade between the European Union and East Africa** • Explain that the European Union (EU) is large political block with 27 countries. (NB UK currently due to leave in March 2019). For trade the member countries negotiate as one body • Present 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 the above activity obtaining statistics from the Internet. • Learners discuss what benefits this trade brings to the EU and to African countries.	• 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 they can 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
i. appreciate the increasing importance of China in Africa and African development (v, a, gs) j. appreciate the need for an economic system which helps to distribute the resources in an equitable way (v, a)	• 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. **Trade between Africa and Asia** • Ask learners what kinds of goods which they buy are made in Asiatic countries. Refer to prior learning. • Learners use Internet to find statistics of trade between East Africa and Asia. • Refer back to the development of industries in China (topic 27). Ask learners why many Asian goods are very cheap (low wages e.g. 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.)	• 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 they can explain their reasons. • Learners suggest what is fair and what is not, in trade relations with other countries such as China and explain why.

ASSESSMENT

Assessing the new expectations for learning

The 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.

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 even things that we cannot easily assess.

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

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'.
Skills	The ability to perform a physical or mental act or operation.
Values	The inherent or acquired behaviours or actions that form a character of an individual.
Attitudes	A set of emotions, beliefs or behaviours toward a particular object, person, thing or event.

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.

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.

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.

Values and Attitudes

Values and Attitudes determine how we interact with others, working in a team, meeting deadlines, being self-driven, holding democratic values, and having respect for democracy, race, gender, disability, human dignity, culture, nation, life and social justice.

ASSESSMENT

Summative Assessment

There will be examinations or tests set at the end of every year. In addition, 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

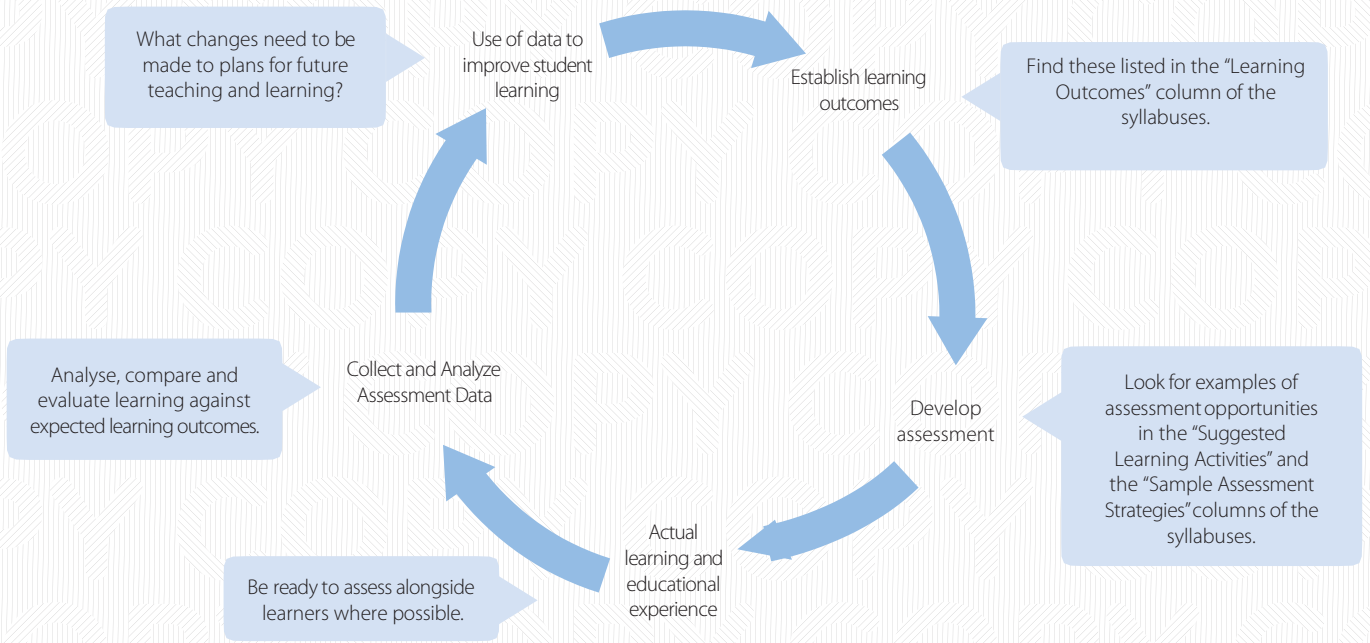
If assessment is to make a difference to teaching and learning, then teachers must use the information they gain from assessment to make some change to the teaching and learning process. This is formative assessment. If teaching and learning stay the same, there would have been no point in carrying out 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

ASSESSMENT

How do we find the opportunity to make formative assessments?

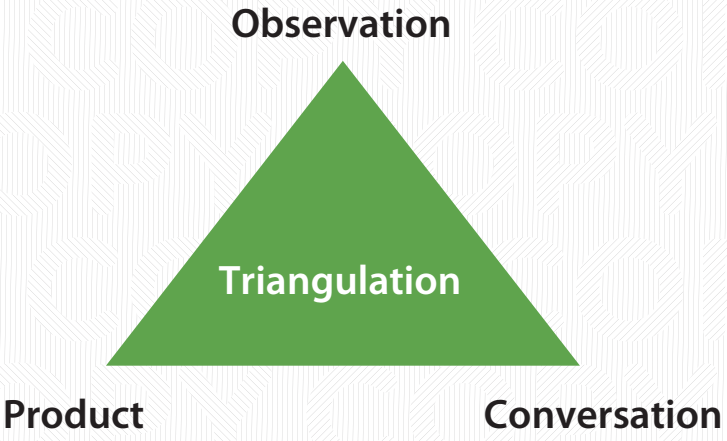
In this curriculum, the teacher's assessment role is not to write tests for learners, but to make professional judgements about learners' learning in the course of the normal teaching and learning process. The professional judgement is about how far the learner meets the Learning Outcomes that are set 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 (e.g. 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 topics. These set out the learning that is expected and give 'Sample Assessment Strategy", and in doing so they contain a range of opportunities for the three forms of assessment.

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 given 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. This means recording the on-going summative assessments of each topic. 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 topic 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 topic 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 subject 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

ASSESSMENT

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 topic. If teachers have been working with the learners over the course of the topic, they will be able to make a broad judgment about which learners have achieved or have failed to achieve the topic'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 topics. 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.

An overall record should be made of the individual topic 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 topic.

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 contribute20% to the final grade of the School Leaving Certificate as elaborated in the assessment framework.

ASSESSMENT

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 subject; enables a learner to apply the knowledge and understanding of the subject.
Sample Assessment Activity	An activity which gives a learner the opportunity to show the extent 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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