EXCEL STANDARD SOCIAL STUDIES

PUPIL'S BOOK 5

FIRST EDITION

BY

EXCEL PUBLISHERS

For Excellence in Social Studies

ACKNOWLEDGEMENT

Developing a book of this nature requires a lot of support from colleagues, friends and family. I would like to register my deep-rooted gratitude to the following people for their unlimited assistance offered towards the completion of this book.

All teachers of Social Studies in Victoria Mutundwe Primary School and Makindye Junior school with whom I worked at various levels for their positive advice and criticism.

All authors whose books we used and consulted during our research for some of the materials in this book.

We do sincerely regret any mistakes which may be found anywhere in this book. It is not intended to be part of this book but accidental.

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PREFACE

Excel Standard Social Studies, Pupils' Book Five has been developed basing on the revised Primary Five Social Studies Syllabus as prescribed by the new curriculum of the National Curriculum Development Center (NCDC). The book contains accurate, relevant and current information covering all topics in all terms of the year in their order. It is intended to guide both teachers and learners.

The pupil's book cares for the interests of the learners in terms of simple and concise language used, simplified content to cater for all learners with different abilities and clear illustrations to make learning enjoyable through observation. Key words for each topic have also been included in order to enrich the learner's vocabulary and mastery of concepts.

The topics have well organised, relevant, and easy to understand notes and facts. It is written in a simple language and is well aided with maps and illustrations/diagrams where necessary to ease understanding.

The book is remarkably precise but detailed in content with no fact left hanging. It has been mainly written for Primary Five in a language that is suitable for both rural and urban Pupils. The book can therefore be used with minimum teacher guidance.

The book has inbuilt and continuous assessment activities at the end of topic. These questions are to help the learners to test their understanding of the concepts covered and are to enable the teacher to track progress as coverage goes on. This also makes the book convenient for individual and class learning by the pupils.

The content of the book has been enriched to enable learners get solutions to the three main levels of assessment at primary level that is to say: Knowledge, Comprehension and Application.

The book is intended to provide learners with knowledge, skills and the desired attitudes and values of Social Studies and the Environment that are important to prepare learners for final assessment of the primary level.

The book is written and developed by experienced teachers of Social Studies and Religious Education and we welcome all comments on the publication with an open mind for the improvement in the teaching and learning of Social Studies. Comments and orders can be communicated directly through the following contacts.

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THEME: LIVING TOGETHER IN UGANDA

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TERM ONE

TERM TWO

TOPIC 1: LOCATION OF UGANDA ON THE MAP OF EAST AFRICA.

DISTRICTS THAT FORM UGANDA.

- A district is an administrative area at the level of Local Council Five (LC V)
- Uganda is divided into districts mainly to ease administration.
- Chairperson LC V is the political head of a district.
- Districts in Uganda are grouped into regions, and each region is divided into sub-regions according to the customs of the people in that area.

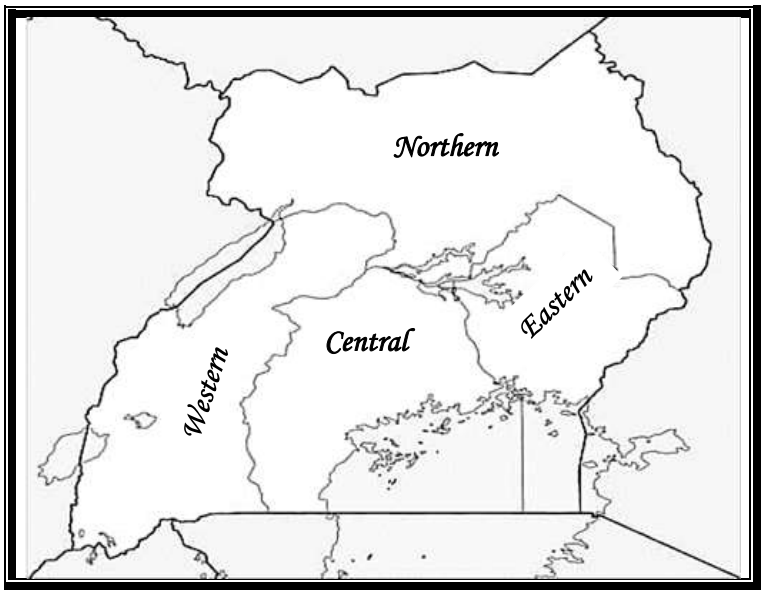
Regions that form Uganda.

- Central region.
- Northern region
- Western region
- Eastern region

Sub-regions found in each region of Uganda.

Region of Uganda	*Sub-region*	*Districts*
Central region	Buganda sub-region	-Kampala -Mpigi -Masaka -Mityana -Luwero -Kalangala -Nakasongola -Mubende -Rakai -Wakiso -Sembabule etc.
Northern region	Acholi sub-region	-Gulu -Kitgum -Agago -Pader
	Karamoja sub-region	-Kotido -Abim -Moroto -Kaabong -Nakapiripirit etc
	Lango sub-region	-Lira -Apac -Oyam -Dokolo etc
	West Nile sub-region	-Arua -Nebbi -Zombo -Yumbe -Adjumani -Koboko
Western region	Bunyoro sub-region	-Hoima -Buliisa -Kibaale -Masindi
	Tooro sub-region	-Kabarole -Kamwenge -Kyegegwa
	Rwenzori sub-region	-Kasese -Bundibugyo -Ntoroko
	Kigezi sub-region	-Kabale -Kisoro -Kanungu -Rukungiri
	Ankole sub-region	-Mbarara -Ibanda -Kiruhura
Eastern region	Busoga sub-region	-Jinja -Iganga -Mayuge -Luuka -Buyende
	Teso sub-region	-Soroti -Serere -Kumi -Amuria etc
	Bugishu sub-region	-Mbale -Sironko -Bududa -Bulambuli
	Sebei sub-region	-Kapchorwa -Bukwo -Kween
	Bukedi sub-region	-Pallisa -Kibuku -Budaka -Tororo -Busia

REGIONS THAT MAKE UP UGANDA.



Reasons why Uganda is divided into districts.

- To ease administration.
- To extend social services nearer to people.
- To create more job opportunities to people.

Disadvantages of creating more new districts.

- It leads to separation of communities/ tribes.
- It leads to high administrative costs.
- It makes equal distribution of resources difficult.

HIGHLAND DISTRICTS

- These are districts which are located in areas of high altitude.
- Such districts usually have many hills and mountains.
- Altitude is the height above the sea level.

Examples of highland districts.

- Mbale
- Kapchorwa
- Kabale
- Kisoro
- Bundibugyo
- Kasese
- Moroto
- Rukungiri

Economic activities that are commonly carried out in highland districts.

- Tourism
- Crop growing
- Mining

Problems faced by people living in highland districts.

- Landslides
- Severe soil erosion
- Poor transport network
- Difficulty in agricultural mechanisation.

Possible solutions to the problems facing people living in highland districts.

- By rearing donkeys to use them as means of transport.
- By constructing winding roads.
- By practising afforestation and reafforestation to control landslides.
- By terracing, contour ploughing and strip cropping to reduce soil erosion.

Note:

- ✓ *Heavy rainfall is the major cause of landslides in highland areas.*
- ✓ *Landslides can be controlled in highland areas by planting more trees.*

- ✓ *Ground transport is very poor in highland areas because it is very difficult and expensive to construct roads in highland areas.*
- ✓ *Agricultural mechanisation is so poor in highland areas because the steep slopes make the use of tractors difficult.*
- ✓ *Road transport can be improved in highland areas by constructing winding roads.*
- ✓ *People living in Kapchorwa district rear donkeys mainly to use them as means of transport.*

ISLAND DISTRICTS.

- **An island is an area of land which is completely surrounded by a water body.**
- **The island districts in Uganda are found in Lake Victoria.**

Examples of Islands districts.

- **Kalangala**
- **Buvuma**

Economic activities that are commonly carried out in Island districts.

- **Fishing.**
- **Crop cultivation (oil palm growing, maize, banana, potatoes)**
- **Lumbering**
- **Trading.**
- **Tourism due to presence of Ssese forest, Ngamba island which is famous for Chimpanzees**

Benefits enyoyed by Island districts.

- **They get easy access to water.**
- **They have fertile soils.**
- **They receive plenty of rainfall.**

Problems facing people living in Island districts.

- **Poor road transport.**
- **Attacks from aquatic animals eg.crocodiles.**
- **Lack of hydro electricity**
- **Floods**
- **Poor social service delivery.**
  - **Note**: *-There is no hydro electricity in Kalangala and because it is very expensive to fix electric poles in water of lake Victoria to these districts.*

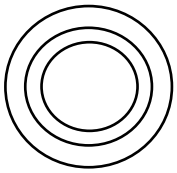
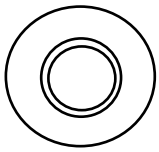
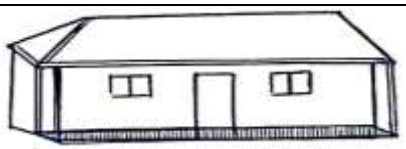
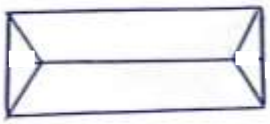
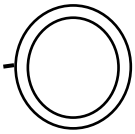
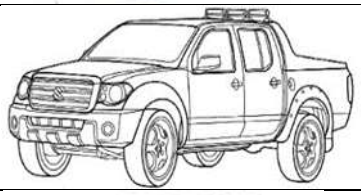
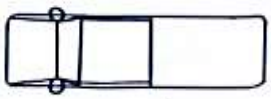
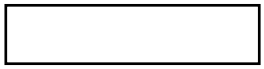
Possible solutions to the problems facing Island districts of Uganda.

- **By using other sources of energy eg. solar energy**
- **By employing more social service providers.**
- **By providing better means of water transport.**
- **By building better social service centres in island districts.**
- **By paying attractive salaries to people who provide social services in island districts.**

MAPS AND PICTURES.

- **A map is a drawing/ representation of an object as seen from above.**
- **Maps show how objects look like when viewed directly from above.**
- **We use symbols to help us understand and interpret a map of a detailed area.**
- **The boundary of a map determines the size and shape of the map.**
- **A picture is a representation of an object as seen from above.**
- **All features on a picture can be clearly seen as real objects.**
- **Pictures are more detailed than maps.**

Maps and Pictures of different objects

Object name	*Picture*	*Map*
a tree		
a plate		
a pot		
a house		
a chair		
a cup		
a hut		
a car		
a table		

Similarity between maps and pictures.

- **Both are representations of objects.**

Types of maps.

(i) Political maps. These maps show boundaries of villages, counties, districts and countries.

(ii) Topographic maps. These maps show physical features/ landforms of a given area.eg.mountains etc.

(iii) Flow-line maps. These show movement of people, goods, animals etc.

(iv) Thematic maps. These show various social and economic themes eg. trade, energy.

Importance of maps.

- They are used for locating places.
- They help travelers to plan for routes to take while on their journeys.
- They help people to know the relief, climate and vegetation of different areas.

ELEMENTS OF A MAP.

- A compass direction
- A scale
- A title/heading
- A frame
- A key

Importance of different elements of a good map.

Element	*Importance*
❖ A compass direction	❖ It helps to show the direction of places on a map. -A map reader may fail to know the direction of places shown on the map if he/she reads a map without a compass direction.
❖ A title/ heading	❖ It helps one to know what the map is all about. -One who reads a map without a title may fail to know what the map is all about.
❖ A key	❖ It helps a map reader to interpret symbols used on a map. -A key gives detailed information about the map. -A map reader may fail to interpret/ know the meaning of symbols used on a map if he/she reads a map without a key.
❖ A scale	❖ It helps a map reader to calculate the actual ground distance on a map. -A map reader may fail to calculate the actual ground distance between places on the map if he/she reads a map without a scale.
❖ A frame	❖ It shows the extent of the area represented by the map.

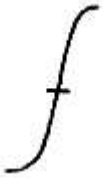
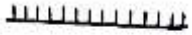
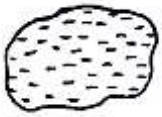
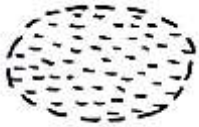
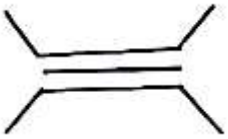
MAP SYMBOLS.

- These are features that are used to represent real objects on a map.

Why symbols are used on maps.

- To avoid congestion on the map.
- To make map reading easy.
- To ensure neatness of a map.

Common symbols used on maps.

				
A rift valley	*waterfall*	*A dam*	*A canal*	*A swamp*
				
A quarry	*A hill*	*airport*	*contours*	*a factory*
				
Railway line	*A port*	*hospital*	*mountain peak*	*permanent lake*
				
Seasonal lake	*church*	*A bridge*	*Seasonal river*	*Compass direction*

A COMPASS DIRECTION

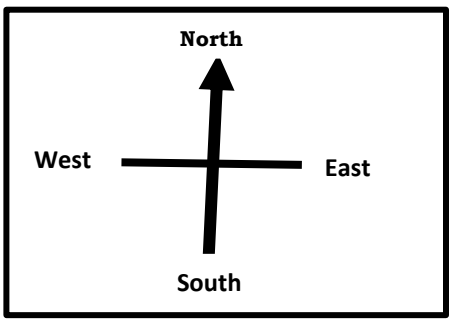
- **A compass** is an instrument used to find direction of places.
- A drawn compass is called *a compass rose.*

People who use a compass.

- Rally drivers
- Tourists
- Pilots
- Mountain climbers
- Sailors
- Scouts and girl guides.
- Soldiers.

A compass direction.

- **A compass direction** is a symbol used on a map to show the direction of places.
- The compass points are divided into the cardinal points,semi-cardinal points (secondary points) and tertiary points.
- **Cardinal points** are the four major points of a compass.



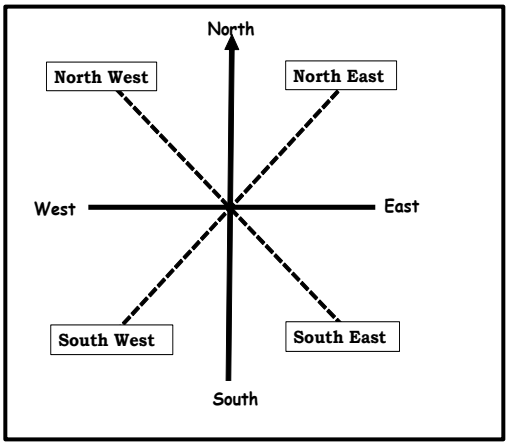
These include;

- North
- South
- West
- East

- **Secondary points** are the directions that lie midway of cardinal poits.
- Semi-cardinal points lie at 45° from the cardinal points.

These include;

- South East
- South West
- North East
- North West



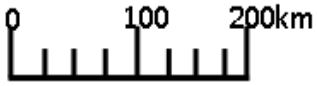
A SCALE.

- **A scale** helps a map reader to calculate the actual ground distance on a map.
- A map reader who reads a map without a scale may fail to calculate the actual ground distance on a map.
- A scale is only found on accurate maps.
- **A sketch map** is a map which is not drawn to scale while **an accurate map** is a map which is drawn to scale.

Types of scales.

(i) Linear scale.

This is the type of scale drawn using lines that are divided into equal parts.



Example;

*Find the actual ground distance between town **Q** and town **S** if there is a distance of 6cm between the two towns on the map.*

Solution;

1cm = 100km

6cm = (6×100)km

= 600km.

*Therefore,the actual ground distance between Town **Q** and Town **S** is 600km.*

(ii) Representative scale/ fractional scale.

This is the type of scale written as a mathematical fraction.

It can also be written as a ratio.eg. $\frac{1}{100\text{km}}$ or 1:100km.

(iii) Statement scale.

This type of scale can be given as a statement or words.

Eg.1cm on a map represents 100km on the ground.

LOCATING UGANDA USING THE GRID REFERENCE SYSTEM

Ways of locating places.

- By using a compass.
- By using neighbouring places.
- By using landmarks.

Ways of locating places on a map

- Using a compass direction.
- Using neighbouring places.
- Using physical features.
- Using lines of latitude and lines of longitude (grid reference system)

GRID REFERENCE SYSTEM

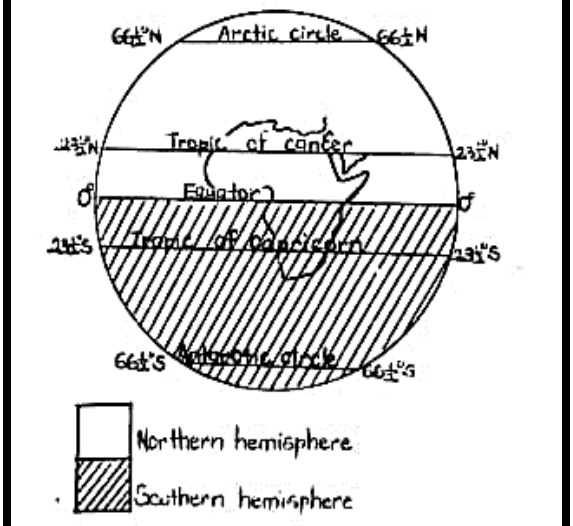
- This is the method of locating places using lines of latitude and lines of longitude.
- Grid refers to the network of horizontal and vertical lines used as references co-ordinates to locate places on a map.

(i) LINES OF LATITUDE.

- These are imaginary lines drawn on maps or globe from East to West.
- The general name for all lines of latitude is parallels because they do not meet at any point.
- Latitude is the distance in degrees North or South of the equator.
- Lines of latitude help in determining climate of places.
- Lines of latitude help us to tell how far a place is North or South of the Equator.

Major lines of latitude.

- The Equator (0^0)
- Tropic of Cancer ($23\frac{1}{2}^0$N)
- Tropic of Capricorn ($23\frac{1}{2}^0$S)
- Arctic circle ($66\frac{1}{2}^0$N)
- Antarctic circle ($66\frac{1}{2}^0$S)



THE EQUATOR

- *The Equator divides the world into two equal parts (hemispheres)*
- *The Equator is marked **0°** because it is the starting point for all latitude readings.*
- *The Equator is the most important line of latitude because it crosses the world at the centre.*
- *All districts which are crossed by the equator lie in both the Northern and Southern hemisphere.*
- *Note:*
- ***A globe** is the model of the earth*
- *The Equator crosses **lake George** and **lake Victoria** in Uganda.*
- ***A hemisphere** is a half part of the world as divided by the equator or prime meridian.*
- *The area between the Tropic of cancer and the Tropic of Capricorn is called the **Tropical region**.*

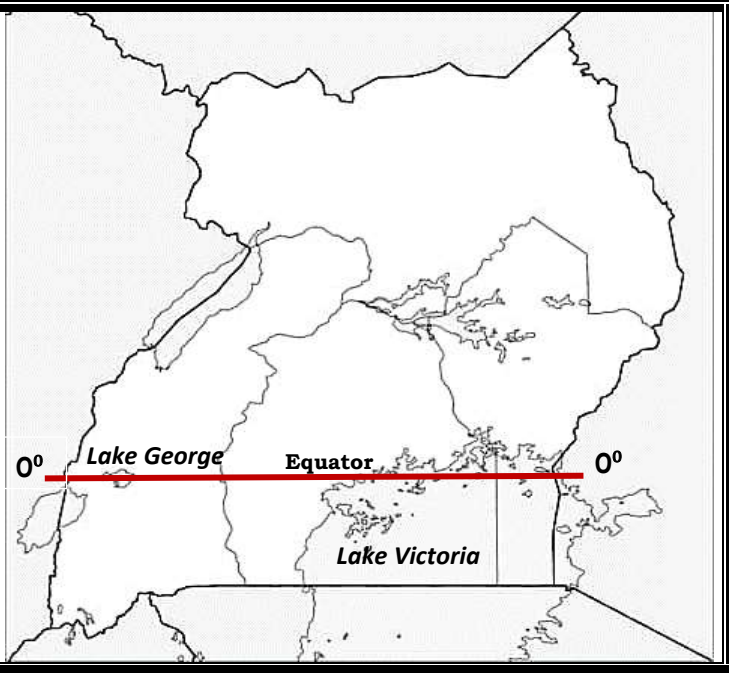
Districts crossed by the Equator in Uganda

- Ibanda
- Kasese
- Mpigi
- Mukono
- Wakiso
- Namayingo
- Mayuge
- Kalungu
- Bukomasimbi
- Buvuma
- Sembabule
- Lyantonde
- Kamwenge

Importance of lines of latitude

- They help to determine the climate of a place.
- Lines of latitude and lines of longitude are used to locate places on a map.

Location of the Equator on the map of Uganda



Location of the Equator at Kayabwe along Kampala-Masaka road

Practical activity;

Use the political map of Uganda and identify all districts that;

(i) Are crossed by the Equator.

(ii) Completely lie in the Northern hemisphere

(iii) Completely lie in the Southern hemisphere.

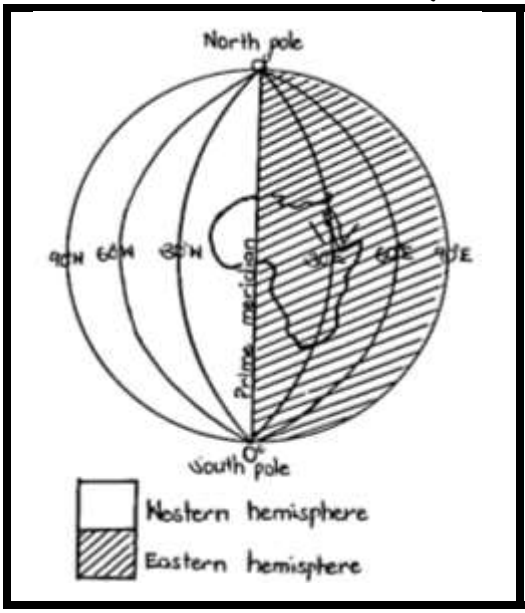
(iv) Lie in both the Northern and the Southern hemisphere

(ii) LINES OF LONGITUDE.

- **Lines of longitude are imaginary lines drawn on maps and globe from the North pole to the South pole**
- **They are also known as meridians.**
- **Lines of longitude meet at the poles of the earth.**

Major lines of longitude.

- **The Prime meridian/ Greenwich meridian (0^0)**
- **The International dateline. (180^0E or W)**



The Prime Meridian/ Greenwich Meridian

- *The Prime meridian is also called the **Greenwich meridian** because it crosses Greenwich town in London.*
- *The Prime meridian is marked **0^0** because it is the starting point for all longitude readings.*
- *The Prime meridian divides the world into the Eastern and Western hemisphere.*
- *All countries crossed by the Prime meridian lie in both the Eastern and Western hemisphere.*

Note;

- ***The Prime meridian** helps in telling international time.*
- ***The International dateline** separates one day from the next day.*
  e.g. East of the International dateline may be Wednesday while West of it is Tuesday.

Using the Prime meridian to tell the international time.

- **A time zone is an area/region with the same standard time.**
- **Different regions of the world have different time zones according to the distance from the Prime meridian.**
- **Places which are in the same time zone have the same standard time.**
  e.g. Uganda, Kenya and Tanzania are in the same time zone, and so have the same standard time. (East Africa standard time)
- **East Africa lies at longitude 45º while Rwanda and Burundi are 30ºE of the Greenwich meridian.**
  - **Note:**
    - ✓ *The rotation of the earth on its axis causes days and nights.*
    - ✓ *The earth makes one complete rotation of 360^0 in one day (24hours). Therefore, it rotates through an angle of 15^0 in every 1hour (60min).*
    - ✓ *Every 15^0 E or W of the Greenwich meridian is a time zone.*
    - ✓ *When you travel 15^0 westwards, you lose an hour while travelling 15^0 eastwards makes you gain an hour.*
    - ✓ *We usually add (+) hours for places which are in the East and subtract (-) the time when finding the time for places which are in the West.*
    - ✓ *Changing of the time to and from 24hr clock (by either adding or subtracting 12 hrs) affects the units in which the time is given.(ie. From am to pm and viceversa).*
    - ✓ *Time in each time zone is calculated basing on the Greenwich mean time (GMT) which is at 0^0 longitude.*

Example 1:

1. Find the time in East Africa which is 45^0 if it is 1:00pm at GMT.

Solution,

15^0=1hr

45^0=($\frac{45}{15}$) hrs.

=3hrs

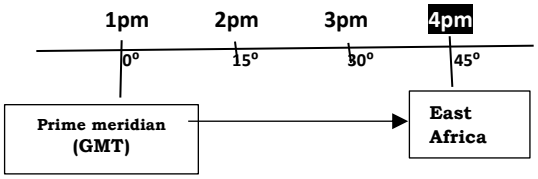
Time in East Africa=1:00pm

+3.00hrs

4:00pm

*Therefore, time in East Africa is **4:00pm.***

OR:



*Therefore, time in East Africa is **4:00pm***

Example 2.

2. What time will it be in country T which is 60^0W if it is 3:00pm in Ghana?

Solution,

15^0=1hr

60^0=($\frac{60}{15}$) hrs

=4hrs

Time in country T is = 3:00pm (+12hours)

-4.00hrs

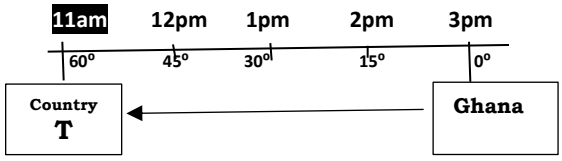
=15.00hrs

-4.00hrs

11:00am

*Therefore, the time in country **T** will be **11:00am**.*

OR:



*Therefore, time in country **T** will be **11:00am***

Locating Uganda using the grid reference system.

- **Uganda is located between latitude 4^0N and 1^0S and longitude 29^0E and 35^0E of the Greenwich meridian.**
- **The farthest point in the North is Zulia while Kisoro is the farthest in the South.**
- **Ishaka is the farthest town in the West while Amudat is the farthest in the East.**

Location of Uganda using the grid reference system.

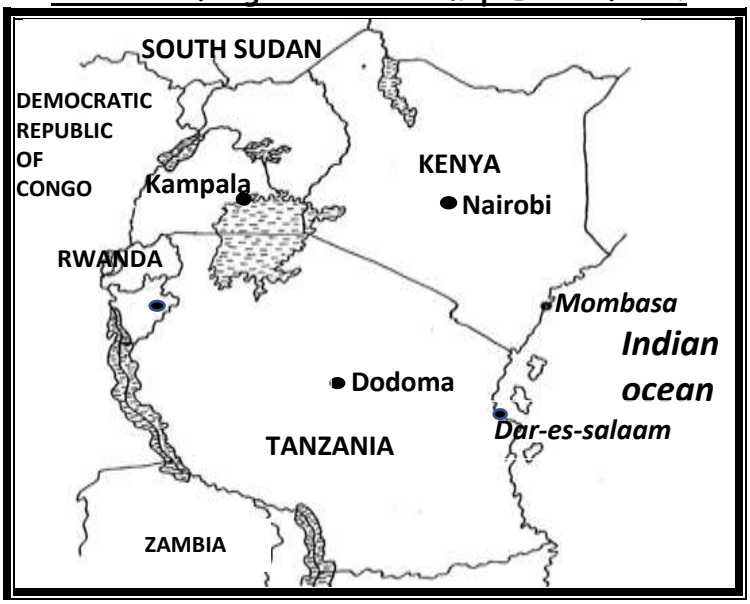
UGANDA'S NEIGHBOURS.

- **Uganda is bordered by five (5) countries.**

These include;

- **Kenya in the East**
- **Tanzania in the South**
- **South sudan in the North**
- **Democratic Republic of Congo in the West**
- **Rwanda in the South West.**

Location of Uganda on the map East Africa.



Countries that neighbour Uganda.

Country	*Direction from Uganda*	*Direction to Uganda*	*Capital City*	*Current President*
Kenya	East	West	Nairobi	H.E Uhuru Kenyatta
Tanzania	South	North	Dodoma	H.E John Pombe Magufuli
DRC	West	East	Kinshasa	H.E Felix Tshisekedi
South Sudan	North	South	Juba	H.E Salva Kiir
Rwanda	South West	North East	Kigali	H.E Paul Kagame

UGANDA AS A LAND LOCKED COUNTRY

- **A land locked country is a country without a coastline.**
- **Uganda is a land locked country because she has no coastline.**
- **Uganda usually uses her neighbours' sea ports when importing and exporting her goods.**

Land locked countries that border Uganda.

- **Rwanda**
- **South sudan**

Seaports that handle Uganda's imports and exports.

- **Port Mombasa in Kenya**
- **Port Dar-es-salaam in Tanzania**
- **Port Matadi in Democratic Republic of Congo**

Note:

- ✓ ***A Seaport*** *is a a place at the coast where ships anchor.*
- ✓ *Uganda mostly imports her goods through port Mombasa because port Mombasa is nearer to Uganda than other sea ports.*

Problems faced by land locked countries in Uganda.

- **High taxation on overseas goods/imports.**
- **Delay of overseas goods in transit.**
- **High transport costs when importing goods.**
- **There is limited trade with the rest of the world.**
- **High prices for imported goods.**

➢ **Note:**

- ✓ ***Smuggling*** *is the illegal importation and exportation of goods.*
- ✓ *Smuggling reduces market for locally manufactured goods.*
- ✓ *It may also lead to importation of low quality goods into the country.*
- ✓ ***Imports*** *are goods that are brought in a country from other countries eg. Vehicles Uganda imports from Germany.*
- ✓ ***Exports*** *are goods a country sells to other countries. eg.food Uganda sells to South Sudan.*

Steps land locked countries can take/ have taken to solve some of the above challenges.

(How Uganda can solve the problems she faces due to her location)

- **By using air transport when importing goods.**
- **By using various sea ports when importing goods.**
- **By promoting domestic industrial production.**
- **By joining common markets in the region.eg.East African Community (EAC)**
- **By improving security along the high ways.**

NON-LAND LOCKED COUNTRIES.

- **A Non-land locked country is a country which has a coastline.**
- **Non-landlocked countries have their own sean ports that handle their imports and exports.**

Non-landlocked countries that neighbour Uganda.

- **Kenya**
- **Tanzania**
- **Democratic Republic of Congo**

Major sea ports of Uganda's neighbours.

Non landlocked country	*Sea port*
Kenya	Port Mombasa
Tanzania	Port Dar-es-salaam
Democratic Republic of Congo	Port Matadi

Benefits enjoyed by Non-land locked countries.

- **They pay less taxes on their imported goods.**
- **They earn income through taxing goods for land locked countries that pass through them.**
- **They can easily trade with other countries.**

Note:

- ✓ *Hinterlands are areas in a country that are far away from the coast or main cities.*

Reasons why Uganda should cooperate with her neighbours

- **To widen market for her goods.**
- **To use her neighbours' sea ports to handle her exports and imports.**
- **To get goods which she cant produce locally.**

1. **Mention the four geographical regions that make up Uganda.**
2. **Give any two reasons why Uganda is divided into districts.**
3. **State any one problem a country faces as a result of having many districts.**
4. **Mention any two sub-regions found in each of the following regions of Uganda.**
   - **(i) Northern region**
   - **(ii) Western region**
   - **(iii) Eastern region**
5. **Mention any two economic activities that are commonly carried out in highland areas.**
6. **What is the major cause of landslides in highland areas?**
7. **Mention any two problems faced by people living in highland areas.**
8. **How can road transport be made possible in highland areas?**
9. **Mention any three elements of a good map.**
10. **What is an island?**
11. **Name the two island districts in Uganda.**
12. **State any one factor that hinders economic development in island districts.**
13. **How is a map different from a picture?**
14. **Which problem is a map reader likely to face when reading a map without;**
    - **(a) A key**
    - **(b) A title**
15. **Why are symbols always used on maps instead of real objects?**

16. Draw the maps of the following objects.

a hut	a tree	a table	a pot

17. Give any two ways one can locate places on a map.
18. What general name is given to lines of latitude?
19. Name any one water body the equator crosses in Uganda.
20. Why is the equator marked 0^0 ?
21. How is a compass direction useful to a map reader?
22. Draw the map symbols for each of the following features.

A rift valley	A waterfall	A dam	A canal

23. How are lines of latitude and lines of longitude important?
24. Name the line of longitude that helps in telling the international time?
25. Find the time in East Africa which is 45^0 E if it is 3:00pm in Ghana.
26. Name the country which Uganda neighbours to the West.
27. Give the meaning of lines of Longitude.
28. Why are lines of latitude sometimes called Parallels?
29. Mention the three types of scales used on maps.
30. Why are maps drawn by P.5 pupils referred to as sketch maps?
31. Find the actual ground distance between Town Q and Town P which are 5cm apart on the map usiong the scale 1cm=100km.
32. State the standard measure for lines of longitude and lines of latitude.
33. Why is the Prime meridian sometimes called the Greenwich meridian?
34. Mention any three districts which are crossed by the equator in Uganda.
35. Musa was facing North East and he turned through an angle of 135^0 anto-clockwise. Which new direction did he face?
36. What causes days and nights?
37. Why is Uganda referred to as a land locked country?
38. Name the two land locked countries that border Uganda.
39. State any two problems Uganda faces due to her location.
40. How is Uganda different from Kenya in terms of location?
41. State the effect of the rotation of the earth on its axis.
42. Name the sea port that handles most of Uganda's imports and exports.
43. Why does uganda mostly use the above seaport to handle her imports?
44. Give any two ways uganda can solve the problems she faces due to her location.
45. Give any two reasons why Uganda should cooperate with her neighbours.

TOPIC 2: PHYSICAL FEATURES OF UGANDA.

INTRODUCTION TO PHYSICAL FEATURES.

- Physical features are land forms of the earth's surface that give it shape.

Examples of physical features.

- Mountains.
- Hills.
- Lakes.
- Rivers.
- Plateau.
- Plains.
- Rift valleys.
- Seas.
- Oceans.
- Valleys.

Types of physical features.

- Drainage features.
- Relief features.

Relief features.

- Relief features are landforms identified by their altitude.
- Relief is the physical appearance of the land scape.
- Altitude is the height above the sea level.

Examples of relief physical features.

- Mountain.
- Plateau.
- Hills.
- Rift valley.
- Valleys.
- Plains.

Drainage features.

- These are landforms that contain water.

Examples of drainage features.

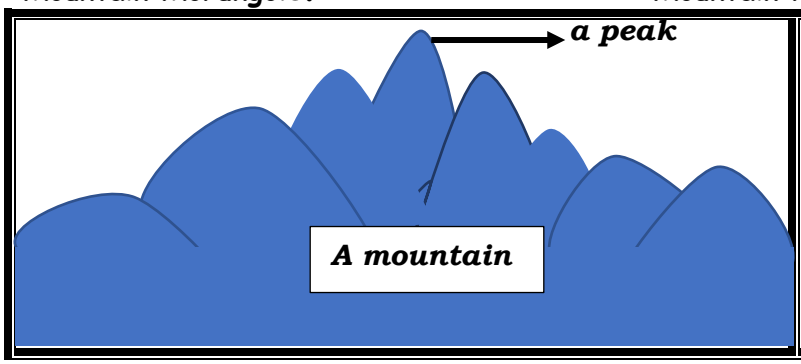
- Lakes.
- Rivers.
- Seas.
- Oceans.

MOUNTAINS IN UGANDA.

- A mountain is a high large piece of land usually higher than a hill.

Examples of mountains in Uganda.

- Mountain Rwenzori.
- Mountain Zulia.
- Mountain Elgon.
- Mountain Morungole.
- Mountain Mufumbiro.
- Mountain Napak.
- Mountain Kadam.
- Mountain Moroto.



A map symbol of ***a mountain peak.***

Types of mountains in Uganda.

- Volcanic mountains.
- Block mountains.

(i) **BLOCK MOUNTAINS**

- These mountains are also called horst mountains.
- Block mountains were formed as a result of faulting.
- Faulting is the cracking/ breaking of rocks in the earth's crust.
- The central block between the two faults is lifted up by compressional forces forming a block mountain.

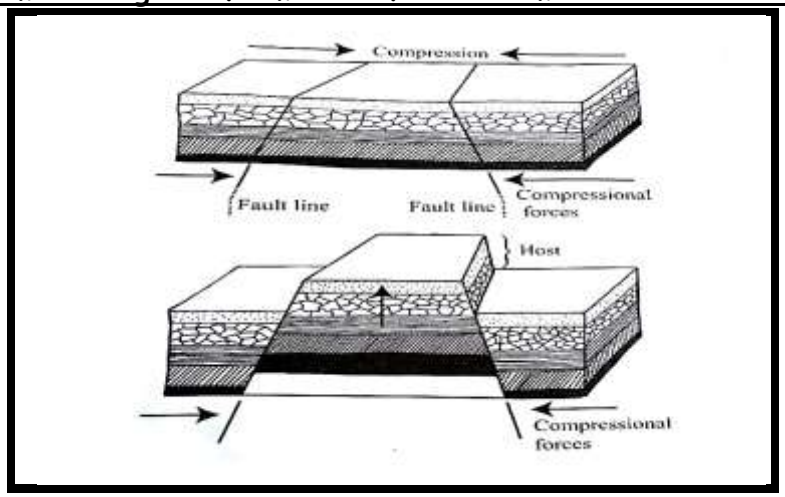
Forces that led to the formation of a block mountain

- Compressional forces
- Tensional forces.

Example of a block mountain in Uganda

- Mountain Rwenzori

A diagram showing the formation of a block mountain due to Compressional forces.



MOUNTAIN RWENZORI.

- It is the highest mountain in Uganda.
- Mountain Rwenzori is located in Western Uganda.
- It is surrounded by districts like Kasese, Kabalore and Bundibugyo.
- It forms a boundary between Uganda and Democratic Republic of Congo.
- It has many peaks ie Margherita as the highest and Stanley as the second highest.
- It is called a range because it has many peaks.
- Margherita is snowcapped throughout the year because it is above the snow line.
- Henry Morton Stanley was the first European explorer to see mountain Rwenzori.
- He named it the "mountains of the moon" because of the snow on its peak which glitters like a moon.
- Mountain Rwenzori is a source of rivers like River Mubuku, river Sebwe, River Nyamwamba, River Mpanga. These rivers flow frm molten snow on mountain rivers.

Tribes that live on the slope of mountain Rwenzori.

- Bakonzo.
- Bamba

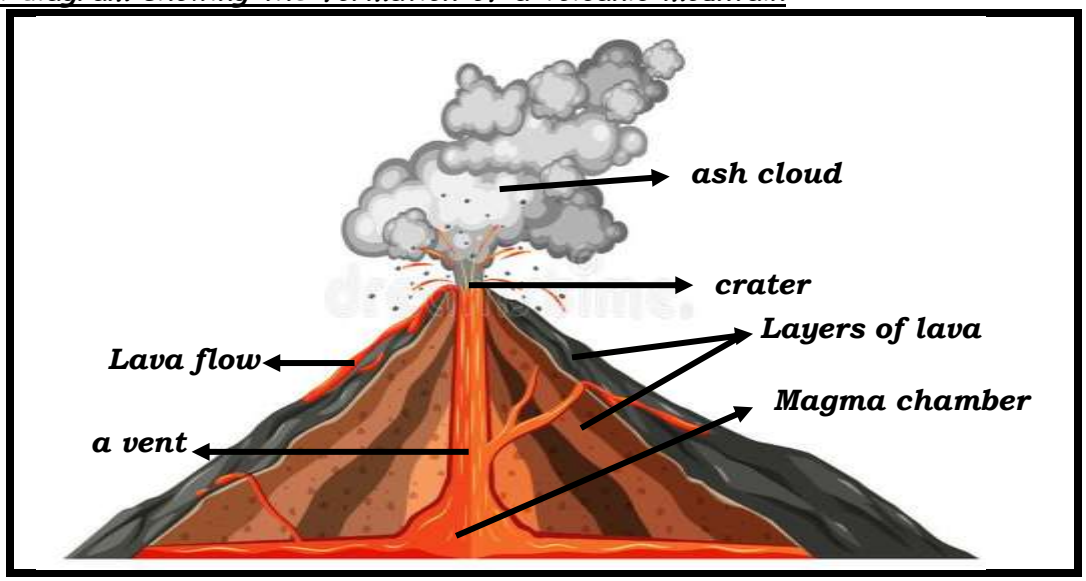
Crops commonly grown on the slopes of mountains.

- Arabica coffee
- Bananas.

VOLCANIC MOUNTAINS.

- These are mountains formed as a result of volcanicity.
- Volcanicity is the process by which magma is forced onto the earth's surface through a vent.
- Volcanicity can also be called *volcanic activity* or *volcanic eruption.*
- A volcano is a mountain with a vent through which magma is forced through the earth crust and onto the earth's surface.
- Magma refers to the molten rock in the earth crust.
- Lava refers to the molten rock on the earth's surface.

A diagram showing the formation of a volcanic mountain



Types of volcanoes

Type of volcano	*Description*	*Example(s)*
Active volcanoes	These are mountains that have erupted in the recent past and still show signs of erupting.	• Mountain Mufumbiro
Dormant volcanoes.	These are mountains that have not erupted in the recent past but still show signs of erupting.	• Mountain Moroto.
Extinct volcanoes	These are mountains that do not show any signs of erupting.	• Mountain Elgon • Mountain Napak • Mountain Morungole • Mountain Zulia • Mountain Kadam

Importance of volcanicity

- ❖ It leads to formation of fertile volcanic soils which are favourable for crop growing. eg.Arabica coffee is mainly grown on the slopes of mountain Elgon due to the presence of fertile soils.
- ❖ Volcanic mountains attract tourists who bring in income.

Dangers of volcanicity.

- **It leads to death of people and animals.**
- **It leads to destruction of property.**
- **It leads to air pollution.**

Other features formed as a result of volcanicity.

- **Crater lakes.**
- **Calderas**
- **Inselbergs**
  - ✓ ***An inselberg*** *is an isolated hill that stands above the general level of the surrounding land eg.Labwor hill in Karamoja, Musaijamukuru hill in Hoima, Osukuru hill in Tororo.*
  - ✓ *These inselbergs attract tourists who bring in income and are also a major source of minerals eg. The Osukuru hills which provide limestone used for making cement.*
- **Lava dammed lakes**
- **Hot springs /geysers eg. Kitagata hotsprings in Bushenyi, Sempaya hotsprings in Bundibugyo**
  - ✓ *Hot springs attract tourists and also help in generation of geothermal energy.*

MOUNTAIN ELGON.

- **It is located in Eastern Uganda.**
- **It is the second highest mountain in Uganda.**
- **It is locally known as mountain Masaba.**
- **Its highest peak is Wagagai.**
- **It forms a boundary between Uganda and Kenya.**
- **The Bagishu and Sabiny live on slopes of mountain Elgon.**
- **Joseph Thomson was the first European explorer to see mountain Elgon.**
- **Mountain Elgon national park is located on mountain Elgon.**

Crops commonly grown on the slopes of mountain Elgon.

- **Arabica coffee**
- **Bananas**
- **Wheat**
- **Maize**

Factors that favour the growth of arabica coffee on the slopes of mountain Elgon

- **Presence of volcanic fertile soils.**
- **Presence of heavy rainfall.**
- **Presence of cool temperature.**
  - ➢ **Note:**
    - ✓ *Kapchorwa district is the leading producer of wheat in Uganda.*
    - ✓ *People living in Kapchorwa rear donkeys mainly to use them as means of transport since their district experiences poor transport network.*

Districts that share part of mountain Elgon

- **Mbale**
- **Sironko**
- **Kapchorwa**
- **Manafwa**

Rivers that originate from mountain Elgon.

- **River Manafwa**
- **River Malaba**
- **River Mpologoma**
- **River Nzoia in Kenya**

MOUNTAIN MUFUMBIRO.

- **It is located in the South Western part f Uganda.**
- **Its highest peak is Muhavura. Other peaks include mgahinga and Sabinyo.**
- **It is shared by Uganda, Rwanda and Democratic Republic of Congo.**
- **It forms a range of mountains in the Kigezi sub-region in South Western part of Uganda.**
- **The Mufumbiro range is a home for the mountain gorillas in Bwindi and Mgahinga national park.**
- **Mountain Mufumbiro mainly occupies Kabale, Kisoro and Kanungu districts.**
- **The area around mountain Mufumbiro was referred to as "the Switzerland of Africa" by Winston Churchill because it has features which are similar to those of the Alps mountains in Switzerland.**

Tribes that live on the slopes of mountain Mufumbiro.

- **Bakiga**
- **Bafumbira.**

Crops mainly grown on slopes of mountain Mufumbiro

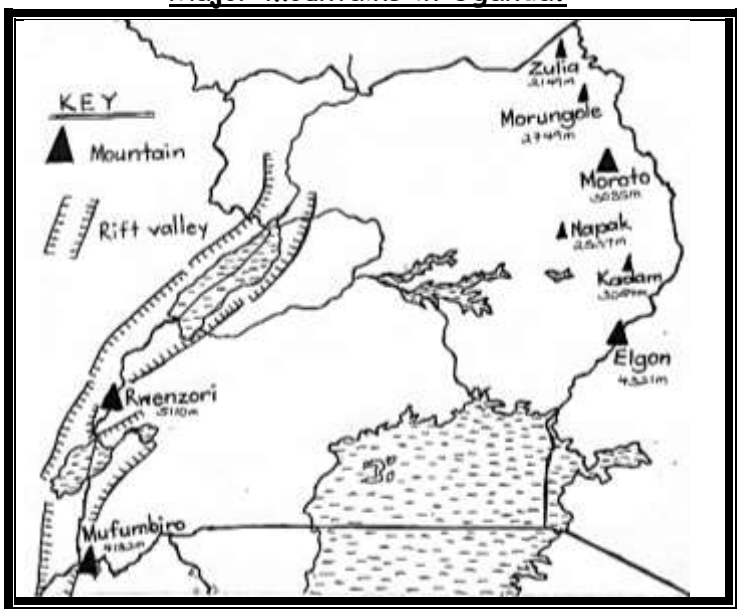
- **Potatoes**
- **Vegetables**
- **Sorgum**
- **Pyrethrum**

- **Note:**
  - ✓ *The high population/ over population in Kigezi sub-region has led to the division of land into small plots in this area* ***(Land fragmentation)***
  - ✓ *Land fragmentation hinders agricultural mechanisation and also leads to low food production.*

MOUNTAIN MOROTO.

- **It is located in the North Eastern part of Uganda.**
- **Its highest peak is called Sokdek.**
- **Sogolomon is the second highest peak of mountain Moroto.**
- **The Karimojong tribe mainly lives on the slopes of mountain Moroto.**
- **The Karimojong mainly carry out pastoralism.**
- **The area around mountain Moroto receives very little rainfall because it receives dry winds from the North East.**

Major mountains in Uganda.



Importance of hills and mountains

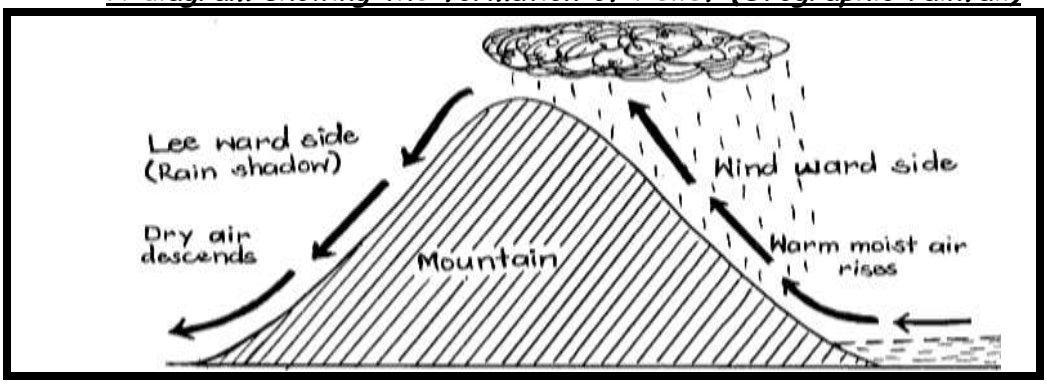
- ❖ **They help in rain formation ie.Relief rainfall.**
- ❖ **They have fertile soils which support crop cultivation.**
- ❖ **They attract tourists who bring in income.**
- ❖ **They have cool temperatures which favour dairy farming.**
- ❖ **They are used by telecommunication companies to place on masts.**
- ❖ **Some mountains are a source of rivers.**
- ❖ **Some mountains are a source of minerals eg.Osukuru hills in Tororo which provide limestone.**
- ❖ **They are a source of building materials eg.stones**
- ❖ **Some mountains form natural boundaries between countries.**

Eg-Mountain Rwenzori creates a natural boundary between Uganda and DRC.

-Mountain Elgon creates a natural boundary between Uganda and Kenya.

-Mountain Mufumbiro creates a natural boundary between Uganda and Rwanda.

A diagram showing the formation of Relief (Orographic rainfall)



Economic activities commonly carried out in mountainous areas.

- ❖ **Crop growing**
- ❖ **Lumbering**
- ❖ **Stone quarrying**
- ❖ **Tourism**
- ❖ **Mining**

Disadvantages of mountains.

- ❖ **They hinder agricultural mechanisation.**
- ❖ **They make road and railway construction difficult.**
- ❖ **Some volcanic mountains erupt and destroy property.**
- ❖ **They are greatly affected by landslides and soil erosion.**

Problems faced by people living on slopes of mountains.

- ❖ **Severe soil erosion.**
- ❖ **Much coldness.**
- ❖ **Landslides due to heavy rainfall.**
- ❖ **Poor agricultural mechanisation.**
- ❖ **Poor road transport.**

Why transport is very poor in highland areas.

It is difficult and expensive to construct roads in mountainous areas.

Note:

- ➢ *People living in highland areas (Kapchorwa) rear donkeys to use them as means of transport.*
- ➢ *Heavy rainfall received in highland areas is the major cause of landslides.*
- ➢ *Landslides can be reduced in highland areas through planting trees.*
- ➢ *Road transport can also be improved in highland areas by constructing winding roads.*

- *The government has relocated people of Bududa to safer plains and plateaus to save them from landslides.*

Why agricultural mechanisation is poor in mountainous areas.

The steep slopes make the use of tractors difficult and very expensive.

THE RIFT VALLEY.

- **A rift valley is a long and wide depression on the earth's surface with steep sides.**
- **The steep sides of a rift valley are called *escarpments.***
- **The rift valley was formed as a result of *faulting.***
- **The width of the Great rift valley varies from 30 to 100km.**

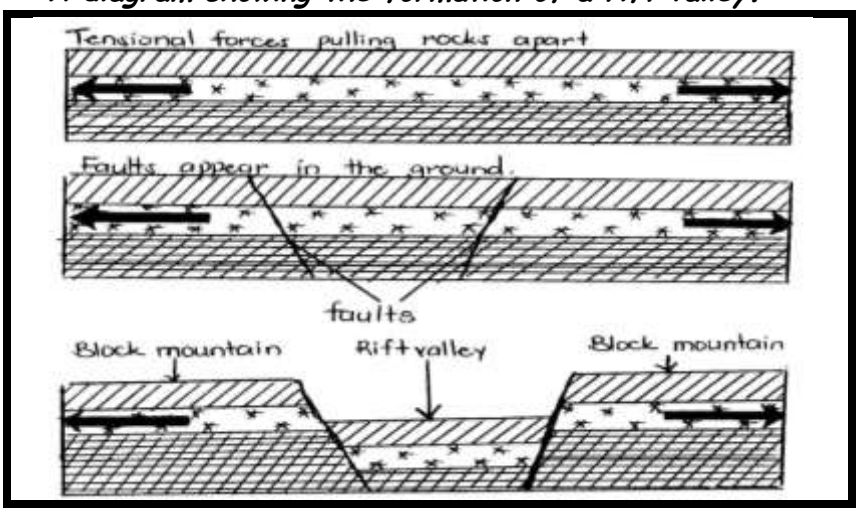
Arms of the rift valley.

- **Western rift valley (runs through Uganda)**
- **The Eastern rift valley (runs through Kenya and Tanzania)**

Note: -***Albertine escarpment*** *is the major escarpment of the Western rift valley.*

-***Crude oil*** *was discovered in the* ***Albertine region.***

A diagram showing the formation of a rift valley.



Features found in the rift valley.

- **Lakes eg,lake Albert, lake Edward and lake George.**
- **Rivers**
- **Hills**
- **Valleys**

Economic activities done in Rift valley areas

- **Crop cultivation**
- **Mining**
- **Tourism**
- **Fishing**
- **Animal rearing**

Importance of the rift valley.

- **It promotes tourism.**
- **It has lakes which promote fishing.**
- **It promotes wild life conservation.**
- **It has plenty of pasture for animal rearing.**
- **It forms natural boundaries between countries eg. The Western rift valley forms a natural boundary between Uganda and Democratic Republic of Congo.**
- **Lakes found in the rift valley are a source of minerals eg.lake Katwe which provides salt.**

Dangers / disadvantages of the Rift valley.

- ❖ It is affected by soil erosion.
- ❖ It hinders road and railway construction.
- ❖ Is is greatly affected by floods.
- ❖ It experiences very high temperatures due to low altitude.

PLATEAUS / PLATEAUX and PLAINS

- A Plateau is a raised flat topped piece of land.
- The plateau covers the largest part of Uganda.
- It lies between 200m and 2000m above the sea level.

Features found on a plateau

- Lakes
- Rivers
- Streams
- Valleys
- Hills

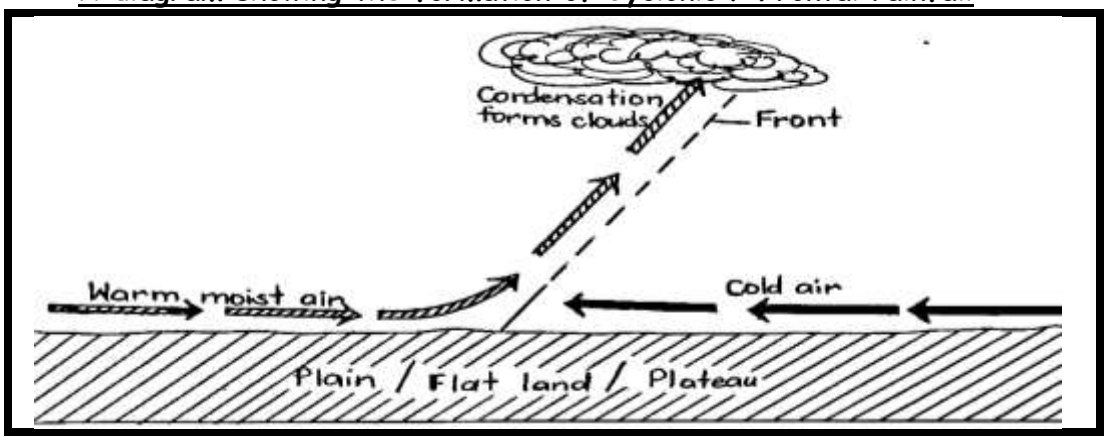
Economic activities carried out in plateau areas.

- Crop cultivation
- Tourism
- Fishing
- Mining
- Animal rearing
- Lumbering
- Industrialisation.

Importance of plateaus.

- ❖ They have fertile soils for crop growing.
- ❖ They promote wildlife conservation.
- ❖ They have plenty of pasture for animal rearing.
- ❖ They are promote tourism.
- ❖ The help in formation of cyclonic rainfall.

A diagram showing the formation of Cyclonic / Frontal rainfall



LAKES IN UGANDA.

- A lake is a mass of non-flowing water on the earth's surface.
- Or: A lake is a depression / hollow on the earth's surface in which water collects.
- Or: A lake is a large area of water that is surrounded by land.

Examples of major lakes in Uganda.

- ❖ Lake Victoria.
- ❖ Lake Albert.
- ❖ Lake Mburo.
- ❖ Lake Bunyonyi.
- ❖ Lake Katwe.
- ❖ Lake Kyoga.
- ❖ Lake Edward.
- ❖ Lake George.
- ❖ Lake Wamala.
- ❖ Lake Kwania
- ❖ Lake Nakivali
- ❖ Lake Bisina
- ❖ Lake Kijanebalola
- ❖ Lake Opeta.

Types of lakes.

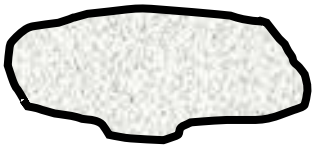
- **Permanent lakes.**
- **Seasonal lakes.**

Permanent lakes are lakes which contain water throughout the year.

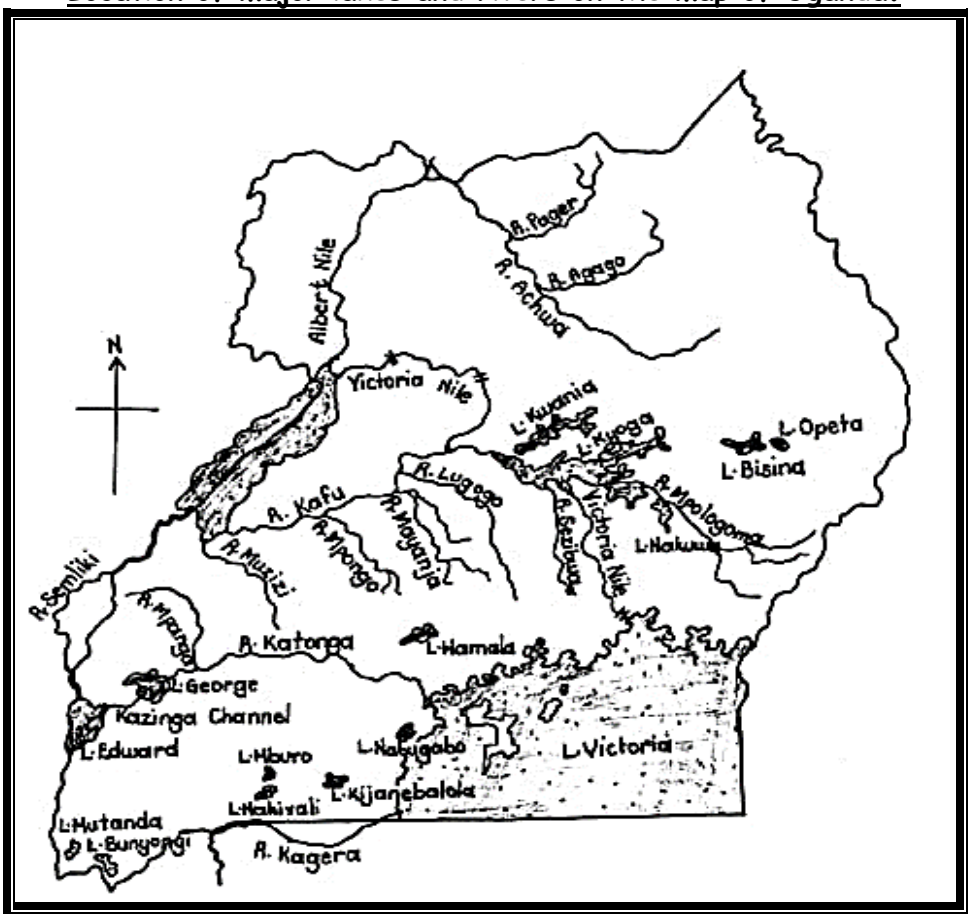
Examples of permanent lakes in Uganda.

- **Lake Victoria.**
- **Lake Mburo.**
- **Lake Albert.**
- **Lake Edward.**
- **Lake George.**
- **Lake Kyoga**

Seasonal lakes are lakes which dry up in the dry season and get water in the wet season.

	
*A map symbol of a **permanent lake***	*A map symbol of a **seasonal lake***

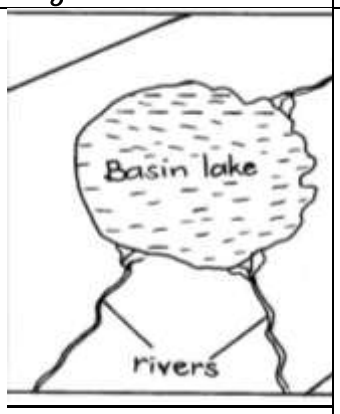
Location of major lakes and rivers on the map of Uganda.



TYPES OF LAKE FORMATIONS.

- **Basin lakes/depression lakes/down warped lakes.**
- **Rift valley lakes.**
- **Lava dammed lakes.**
- **Glacial lakes.**
- **Ox-bow lakes.**
- **Crater lakes.**
- **Man-made lakes.**
- **Lagoon lakes**

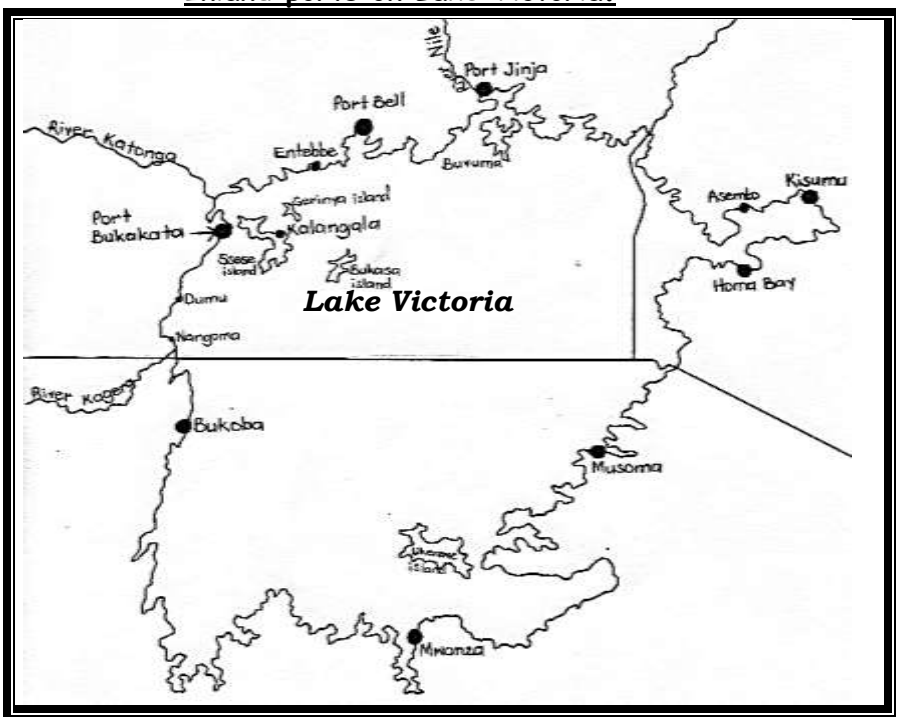
(i) BASIN LAKES.

Diagram	*Description*	*Examples*
	➢ These are also called basin lakes/ down warped lakes. ➢ Basin lakes were formed as a result of ***down warping.*** **Characteristics of basin lakes** ➢ They have irregular shapes. ➢ They are wide. ➢ They are usually shallow. ➢ They have inlet and outlet rivers. ➢ They have fresh water.	• Lake Victoria • Lake Kyoga • Lake Wamala • Lake Mburo • Lake Kwania • Lake Bisina • Lake Opeta **Note: -***Basin lakes have fresh water because* ***they have outlet rivers.***

LAKE VICTORIA.

- Its local name is Nalubaale (Home of gods) in Uganda.
- It's locally known as Sango in Kenya and Nyanza in Tanzania.
- It was formed as result of down warping.
- It is the largest fresh water lake on the Central plateau of Uganda.
- It is referred to as an inter-territorial lake because it is shared by three countries in East Africa.
- It has inland ports which promote inter-territorial trade through handling the goods of the three East African countries.
- *John Hanning Speke* was the first European explorer to see lake Victoria.
- John Hanning Speke named it lake Victoria after Queen Victoria of England by then.
- Kalangala and Buvuma districts are completely surrounded by lake Victoria.

Inland ports on Lake Victoria.



Inland ports on lake Victoria in Uganda.

- **Port Bell.**
- **Port Bukakata**
- **Port Jinja**

NB. ***A port*** *is a place on a water body where water vessels load and off loads.*

LAKE KYOGA.

- **It is a fresh water lake.**
- **It was formed by down warping.**
- **It is located on the Central plateau of Uganda.**
- **It is the swampiest lake in Uganda. This is because it is very shallow.**
- **Lake Kyoga is shallow because it is highly silted.**
- **The Victoria Nile flows from lake Victoria towards lake kyoga. This natural evidence proves that lake Victoria is on a higher altitude than lake Kyoga.**

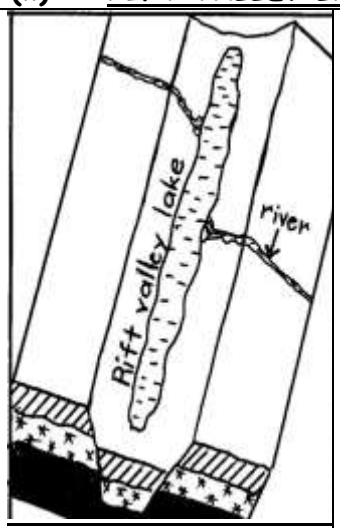
Inland ports of Lake Kyoga.

- **Port Lwampanga.**
- **Port Namasala.**

Inlets of lake Kyoga.

- **Victoria Nile.**
- **River Sezibwa.**
- **River Kafu.**

(ii) RIFT VALLEY LAKES.



Description.

Rift valley lakes are lakes which lie on the floor of the rift valley and were formed as a result of faulting.

Characteristics of rift valley lakes

- **They are long and narrow (oblong)**
- **They are deep.**
- **They are salty.**
- **They have steep sided shores.**
- **Most of them have no outlet rivers.**

Why rift valley lakes are salty.

- **They have salty basement rocks. (because they experience a lot of evaporation)**
- **They have no outlet rivers.**

Note:-*Lake Katwe* *lies on the floor of the riftvalley but it is not considered to be a riftvalley lake because it was formed as a result of* ***volcanicity.***

Examples

- **Lake Albert**
- **Lake George**
- **Lake Edward**

LAKE ALBERT.

- **It is the second largest lake in Uganda.**
- **It was formed by faulting.**
- **It forms a natural boundary between Uganda and Democratic Republic Congo.**
- **Its local name is Mwitanzigye (killer of locusts).**
- **Sir Samuel Baker was the first European explorer to see Lake Albert.**

- It was named Albert after Sir Albert who was the husband of Queen Victoria of England.
- Crude oil was discovered on the shores of lake Albert.

Inland ports on Lake Albert.

- Port Butiaba.
- Port Ntoroko.
- Port Wanseko.

Note: ***Port Butiaba*** *is the main inland port on lake Albert.*

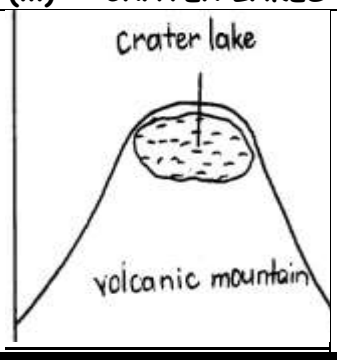
LAKE EDWARD.

- It is a rift valley lake formed by faulting.
- It forms a natural boundary between Uganda and Democratic Republic of Congo.
- It is connected to Lake George by Kazinga channel.
- Kazinga channel has the biggest population of hippopotamuses in Uganda.
- Kazinga channel is located in Queen Elizabeth national park.
- Henry Morton Stanley was the first European explorer to see Lake Edward.

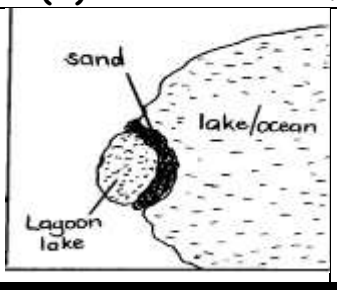
LAKE GEORGE.

- It is the swallowest lake in Uganda formed by faulting.
- It is located in Western Uganda.
- It crossed by the Equator.
- It is connected to Lake Edward by Kazinga channel.

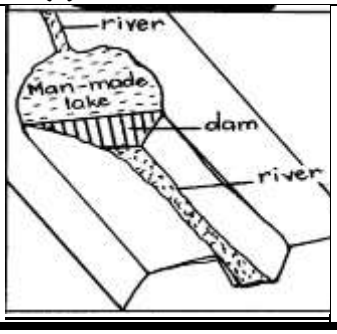
(iii) CRATER LAKES

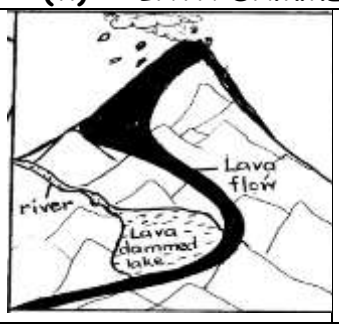
	*Description.* - These are formed on top of volcanic mountains. - They are formed as a result of volcanicity. **Note:-** *Most crater lakes are found in south western Uganda because this region experienced volcanicity for a long time.*	*Examples.* - Lake Katwe - Lake Nyamunuka - Lake Nyakasura **Note:-** *Lake Katwe is famous for salt production.*

(iv) LAGOON LAKES

	*Description.* - These are formed as a result of ***marine deposition.*** - They are formed when sand or mud separates the sea water/ part of a lake.	*Examples* - Lake Nabugabo.

(v) MAN-MADE LAKES

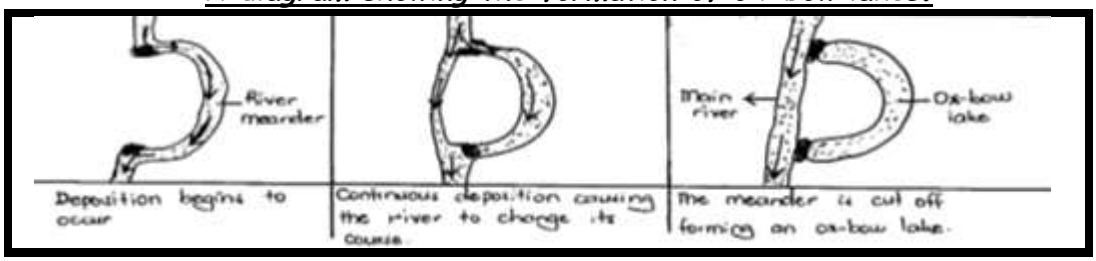
	*Description* - They are formed as a result of man's activities/ dam construction. - They are formed when man constructs a dam along rivers.	*Examples* - Kabaka's lake

	✦ They can also be formed as a result of digging valley dams in swamps. ✦ Most man-made lakes are usually small.	
(vi) LAVA DAMMED LAKES / VOLCANIC LAKES		
	*Description* ✦ They are formed when lava flows and blocks a flowing river.(as a result of volcanicity) ✦ Then water collects behind to form a river.	*Examples* • Lake Bunyonyi (the deepest in Uganda) • Lake Mutanda • Lake Bulela

(vii) OX-BOW LAKES

- ✦ These are formed as a result of *river deposition.*
- ✦ They are mainly formed on meandering rivers in the lower stage of a river.

A diagram showing the formation of ox-bow lakes.



RIVERS IN UGANDA.

- ✦ *A river* is a mass of flowing water on the earth's surface.
- ✦ Many rivers in Uganda originate from high plateaus and highlands because such areas receive plenty of rainfall which provides water to the rivers.
- ✦ Rivers flow from areas of high altitude to areas of low altitude.
- ✦ Rivers continuously get their water from rainfall, melting snow or underground springs.

Examples of major rivers in Uganda .

- ❖ River Nile
- ❖ River Kafu
- ❖ River Mayanja
- ❖ River Kagera
- ❖ River Mpologoma
- ❖ River Achwa
- ❖ River Katonga
- ❖ River Sezibwa
- ❖ River Nkusi
- ❖ River Semliki
- ❖ River Manafwa

Types of rivers

- ➢ Permanent rivers.These are rivers which flow throughout the year

Examples of permanent rivers.

- ❖ River Nile
- ❖ River Kafu
- ❖ River Kagera
- ❖ River Mpologoma
- ❖ River Achwa
- ❖ River Katonga

❖ **River Sezibwa**

- **<u>Seasonal rivers</u>.These are rivers that mainly flow during the wet season and dry up during the dry season.**

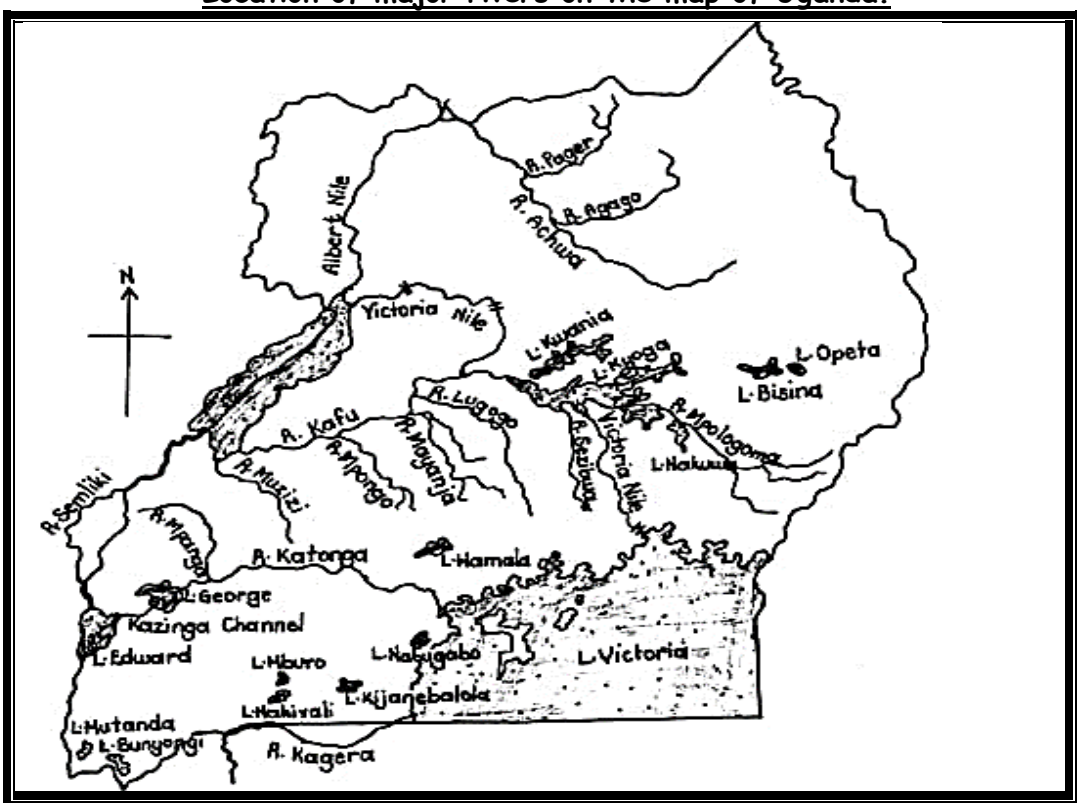
<u>Terms related to rivers.</u>

- ✓ **<u>A river source</u> is a point where a river begins to flow.**
- ✓ **<u>A river mouth</u> is a point where a river ends its flow.**
- ✓ **<u>A tributary</u> is a small river that joins the main river.**
- ✓ **<u>A distributary</u> is a small river that branches away from the main river.**
- ✓ **<u>A river confluence</u> is a place where two or more rivers meet.**
- ✓ **<u>An estuary</u> is a wide part of a river as it ends its flow.**
- ✓ **<u>A drainage basin</u> is an area of land drained by a river, its tributaries and distributaries.**
- ✓ **<u>A flood plain</u> is a flat area near a river that often floods when the water level rises.**
- ✓ **<u>A delta</u> is the place where a river forms several streams as it ends its flow eg.The Nile delta.**

Note:

- ✓ *Deltas are formed at the mouths of rivers, as a result of* ***river deposition.***
- ✓ *Deltas have rich fertile soil for crop growing.*
- ✓ *They also attract tourists who bring in income.*
- ✓ ***A waterfall*** *is a steep flow of a river.*
  Or.*It is a point where a river flows from high altitude to a low altitude.*
- ✓ *A Cataract is a series of waterfalls on a river.*
- ✓ *Waterfalls attract tourists who bring in income, and also help in generation of hydro electricity.*
- ✓ *However, waterfalls may cause water accidents and also block water transport.*

<u>Location of major rivers on the map of Uganda.</u>



Stages of River development

- A river has three main stages/ courses.

These are;

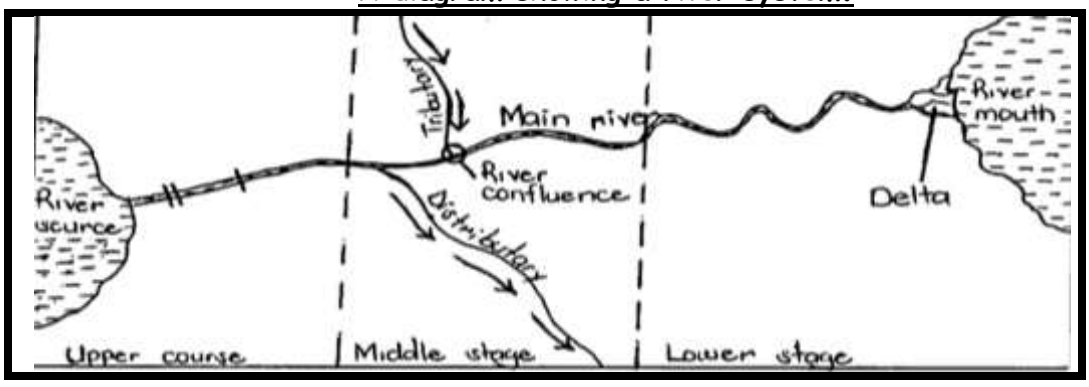
- The Youth stage/Upper course
- The Mature stage/ Middle stage
- The Old stage/ Lower stage (Senile)

Stage	*Characteristics*
The Upper course	• It has waterfalls and rapids • The river flows very fast. • It forms a V-shaped valley (gorge). • The river flows over a steep slope. • There is a lot of vertical erosion. Note: ➢ *This stage is suitable for generation of hydro electricity because it has many waterfalls.* ➢ *The upper stage is suitable for tourism because it has many waterfalls which attract tourists.*
The Middle stage	• The river flows gently. • It forms a U-shaped valley. • There is lateral erosion in this stage. • It begins to form meanders.
The Lower stage	• The river flows slowly. • It forms meanders and ox-bow lakes. • It forms a delta or an estuary. • It forms alluvial plains. • The river deposits its load forming flood plains.

Features found along river valleys.

- ❖ Waterfalls
- ❖ Deltas
- ❖ Estuaries
- ❖ Gorges
- ❖ Ox-bow lakes

A diagram showing a river system.



Case Study of Major Rivers in Uganda.

RIVER NILE.

✓ River Nile is the longest river in the world. ✓ Its local name is Kiira. ✓ It flows northwards because the north is on a low altitude.	Source	-Lake Victoria
	Mouth	-Mediterranean sea
	Countries drained	-Uganda -Sudan -Ethiopia -Egypt -South Sudan

✓ John Hanning Speke was the first European explorer to see the source of river Nile.  	Main tributaries	-River Achwa in Uganda
	Waterfalls	-Karuma falls -Murchison falls -Itanda falls
	Hydro electric power dams	-Nalubaale power dam -Kiira dam -Bujagali power dam -Karuma dam.
	Nile valley countries	-Uganda,-South Sudan, -Ethiopia, -Sudan, -Egypt. ***NB:-****The Nile valley is the area drained by river Nile, its tributaries and distributaries.*
	Sections of River Nile	-Victoria Nile (between lake Victoria and lake Albert) -Albert Nile (between lake Albert and Nimule) -White Nile (from Nimule northwards)

Reasons why some parts of River Nile are not navigable.

- Presence of waterfalls and rapids.
- Presence of floating vegetation/suds.
- Presence of dangerous aquatic animals.
- Some parts of river Nile are shallow and narrow.

River Katonga.

- It flows from lake George to lake Victoria.

River Kagera.

- It forms a natural boundary between Uganda and Tanzania.
- It flows from highlands in Burundi to lake Victoria in Uganda.

River Kafu.

- It flows from lake Albert to lake Kyoga.

River Semliki.

- It connects lake Edward to lake Albert.
- It forms a natural boundary between Uganda and Democratic Republic of Congo.

River Achwa.

- It is the main tributary of River Nile in Uganda.
- It joins river Nile near Nimule in South Sudan.

Activities carried out on and around lakes and rivers.

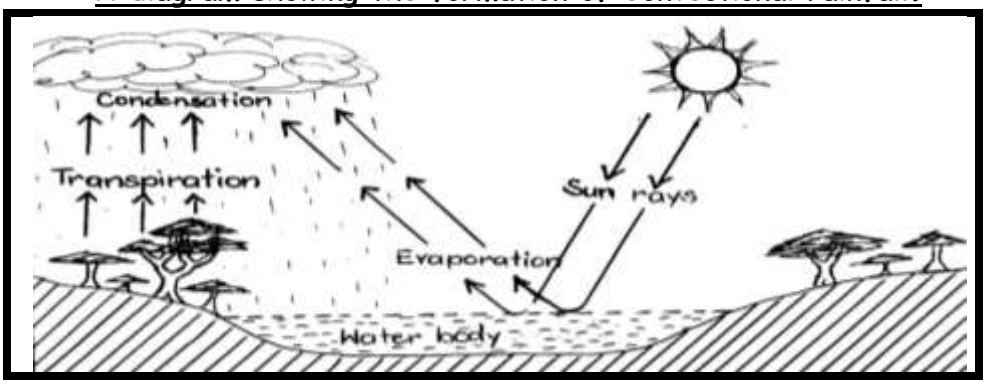
- Fishing.
- Crop growing
- Tourism
- Transportation.
- Trading.
- Industrialisation.

Importance of lakes and rivers

- They help in rain formation.
- They act as fishing grounds.
- Rivers help in generation of hydro electricity.

- ❖ They attract tourists who bring in income.
- ❖ They are homes for aquatic animals.
- ❖ They form natural boundaries between countries.
- ❖ They provide water for irrigation, domestic and industrial use.

A diagram showing the formation of Convectional rainfall.



Problems associated with lakes and rivers.

- ❖ Drowning
- ❖ Flooding
- ❖ They harbour dangerous aquatic animals.
- ❖ They harbour disease vectors.
- ❖ Rivers and lakes hinder road and railway construction.

Problems facing lakes and rivers

- ❖ Silting which reduces the depth of water bodies.
- ❖ Overuse of water from lakes and rivers for irrigation.
- ❖ Drought which lowers the water level.
- ❖ Dumping of wastes into water bodies.
- ❖ Over fishing.

Why some parts of rivers in Uganda are not navigable (not used for for transport)

- ❖ Some rivers have waterfalls and rapids.
- ❖ Some parts of rivers are shallow and narrow
- ❖ Some rivers have dangerous aquatic animals.
- ❖ Some rivers have floating vegetation.(suds)

Reasons why lake shores and river banks are densely populated.

- ❖ They have fertile soils for crop growing.
- ❖ They receive reliable rainfall.
- ❖ They have a lot of employment opportunities.

THE INFLUENCE OF PHYSICAL FEATURES:

a) On People

- ❖ The wind ward side of a mountain attracts very many people due to the presence of fertile soils for cultivation, and also receives plenty of rainfall.
- ❖ The lee ward side of a mountain has very few people because it receives very little rainfall.
- ❖ Plains favour pastoralism due to the presence of pasture.
- ❖ Road and railway transport is poor in highland areas due to the presence of steep slopes.
- ❖ Many people settle around lakes and rivers because such areas receive reliable rainfall and have fertile soils which support crop cultivation.

Factors which attract human settlement in;

i) Plateau areas

- ❖ **Presence of pasture for animals.**
- ❖ **Agricultural mechanisation is easy in such areas.**
- ❖ **Construction of houses, roads, railways and industries is easy.**
- ❖ **Natural hazards like floods are not common in these areas.**

ii) Highland areas

- ❖ **Presence of fertile soils.**
- ❖ **Availability of reliable rainfall.**

Common economic activities carried out in highland areas.

- **Crop farming**
- **Mining**
- **Dairy farming**

Reasons why there are very few people living in higher parts of mountains.

- ❖ **Transport is poor in higher parts of the mountains**
- ❖ **Highland areas experience very low temperatures which do not favour human settlement.**

b) On Plants

- ❖ **Areas around lakes and rivers have many plants due to plenty of rainfall received.**
- ❖ **Slopes of mountains have forests due to presence of fertile soils and reliable rainfall received.**
- ❖ **Mountain tops have few plants due to low temperatures and bare rocks.**

c) On Animals.

- ❖ **Plains have plenty of grass which attracts wild animals.**
- ❖ **Water bodies favour aquatic animals.**
- ❖ **Pastoralism in common on plateau areas due to the presence of pasture for animals.**
- ❖ **There are many climbing animals eg.mountain gorillas in highlands due to the presence of many fruit trees.**

d) On Climate.

- ❖ **Mountains receive plenty of relief rainfall.**
- ❖ **The wind ward side of a mountain receives plenty of rainfall because it receives warm moist air.**
- ❖ **The lee ward side of the mountain receives very little rainfall because it receives dry winds.**
- ❖ **Mountainous areas experience very low temperatures because they lie at a higher altitude.**
- ❖ **Riftvalleys and low lands experience very high temperature because they are of low altitude.**
- ❖ **Lake shores receive plenty of convectional rainfall.**

Testing Exercise.

1. **Name the physical feature that covers the largest part of Uganda.**
2. **Mention the two types of mountains in Uganda.**
3. **Name one block mountain in Uganda.**
4. **Mention the two forces that lead to the formation of Block mountains.**
5. **Complete the table below correctly.**

Mountain	*Formation*	*Highest peak*
(i) Rwenzori	----------	----------
(ii) ----------	----------	Sokdek
(iii) Mufumbiro	----------	----------
(iv) ----------	----------	Wagagai

6. **Why was mountain Rwenzori named "the mountains of the moon" by Henry Morton Stanley?**
7. **Mention the three types of volcanic mountains.**
8. **How is volcanicity important to farmers?**
9. **Why is it not advisable for people to settle on slopes of active volcanic mountains?**
10. **Apart from volcanic mountains, mention any two other features formed by volcanicity.**
11. **State any one factor that favours the growth of arabica coffee on the slopes of mountain Elgon.**
12. **Give the meaning of the term Land fragmentation.**
13. **State the major cause of land fragmentation in Kigezi sub-region.**
14. **How are hills and mountains useful to telecommunication companies?**
15. **State any three ways mountains are ecomonically important.**
16. **Which type of rainfall is commonly received in mountainous areas?**
17. **What term name is given to the steep sides of a rift avlley?**
18. **Name the major escarpment of the Western rift valley.**
19. **Why do rift valley areas experience very high temperatures?**
20. **How is the western rift valley politically important to Uganda?**
21. **Mention any two economic activities that are commonly carried out on plateaus.**
22. **Name the largest fresh water lake in Uganda.**
23. **Compare lake Victoria and lake Albert in terms of their formation.**
24. **State any two characteristics of basin lakes.**
25. **Why is lake Victoria referred to as an inter-terriotorial lake?**
26. **Mention any two inland ports located on lake Victoria.**
27. **Why do basin lakes usually have fresh water?**
28. **Why does river Nile flow from lake Victoria towards lake Kyoga?**
29. **Why is lake kyoga very;**
    (i) Swampy?
    (ii) Shallow?
30. **Name any two rift valley lakes in Uganda.**
31. **State any two characteristics of rift valley lakes.**
32. **Why are most rift valley lakes salty?**
33. **How is Sir Samuel Baker related to lake Albert?**
34. **Name the water channel that connects lake Edward to lake George.**

35. Mention the commonest animal species located at Kazinga channel.
36. Why is lake Katwe not considered as a rift valley lake yet it is located within the rift valley?
37. Name the deepest lake in Uganda.
38. Complete the table below correctly.

Type of lake formation	Process	One example
(i) Basin lakes	----------	----------
(ii) ----------	----------	Lake Edward
(iii) ----------	----------	Lake Katwe
(iv) ----------	Marine deposition	----------

39. State any two economic importance of waterfalls.
40. Give the meaning of each of the following.
    (i) A tributary
    (ii) A confluence
    (iii) A delta
41. Mention one factor that favours hydro electric power generation in the upper stage of a river.
42. Name any three physical features that form a natural boundary between Uganda and Democratic Republic of Congo.
43. Which type of rainfall is commonly received;
    (i) around lakes and rivers?
    (ii) in plateau areas/ plains?
    (iii) in mountainous areas?
    (iv) around large forests?
44. Why is the wind ward side of a mountain good for human settlement?
45. Why does the lee ward side ot the mountain receive very little rainfall?

TOPIC 3: CLIMATE OF UGANDA.

INTRODUCTION TO WEATHER:

- **Weather** is the state of the atmosphere of a place at a given time.
- **Meteorology** is the scientific study of weather.
- **A meteorologist** is a scientist who studies weather.
- Elements of weather are measured and recorded at a *weather station/ meteorological centre.*
- The biggest meteorological centre/ weather station in Uganda is *Entebbe meteorological centre.*
- **Weather forecasting** is the telling of the expected future weather conditions of an area.

Importance of weather forecasting.

- ❖ It helps farmers to plan well their farm activities. e.g. Planting, harvesting etc.
- ❖ It helps travellers to prepare for their journeys.
- ❖ It helps pilots and sailors to avoid air and water accidents.

Types and conditions of weather.

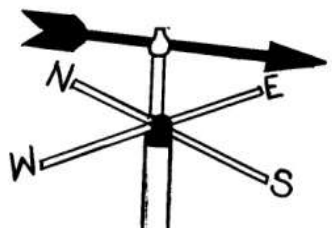
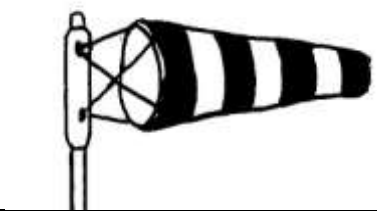
Type of weather	*Condition of weather*
Rainy weather	Rainy
Windy weather	Windy
Cloudy weather	Cloudy
Sunny weather	Sunny
Foggy weather	Foggy

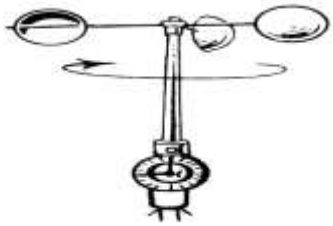
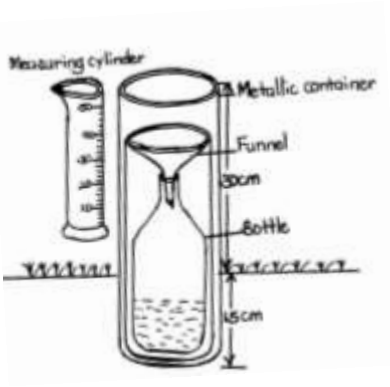
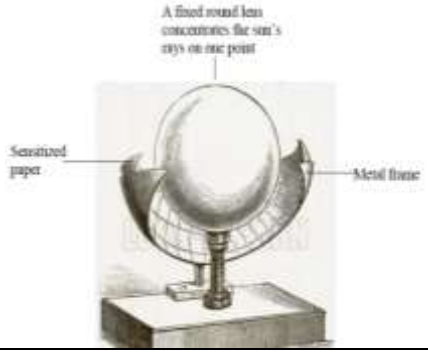
Elements of weather / factors of weather

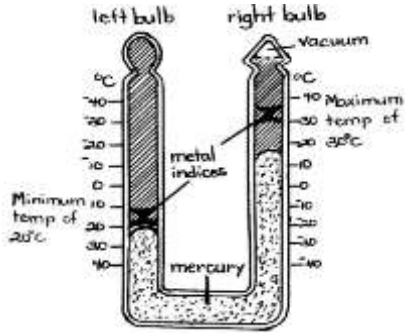
- ❖ Rainfall
- ❖ Cloud cover
- ❖ Wind
- ❖ Humidity
- ❖ Sunshine
- ❖ Air pressure/atmospheric pressure
- ❖ Temperature

WEATHER INSTRUMENTS

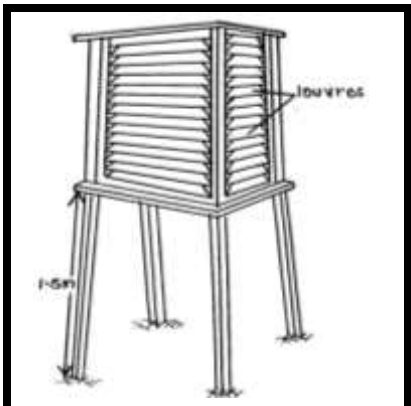
- These are tools used in measuring and recording the atmospheric conditions.

Weather instrument	*Importance*
Wind vane / a weather cock 	❖ It shows the *direction of wind.* ❖ A wind vane is placed in an open place or on top of buildings to prevent wind obstruction. **Note:-***An arrow of a wind vane usually points to the direction from which wind is blowing.*
A Windsock 	❖ It shows the *strength of wind.* ❖ It's usually found at the airports, air fields and at chemical plants. **Note:-***A wind sock is* ***not*** *among the instuments of weather found at a weather station.*

An Anemometer 	❖ **It measures the *speed of wind.*** ❖ **It has cups which trap wind and rotate as wind blows into them.** ❖ **The speed of wind is measured in kilometres per hour (km/hr)**
A Rain gauge 	❖ **It is used to *measure the amount of rainfall received* in an area.** ❖ **It is always placed at least *30cm* above the ground to prevent splashes and flowing water on the ground from entering the rain gauge.** ❖ **It should be placed 15cm below the ground to prevent the evaporation of water collected and to make it firm.** ❖ **It is placed in an open flat place to prevent obstruction of rain drops from entering the funnel in order to take accurate measurements.** ***<u>Importance of different parts of a rain gauge.</u>*** ❖ ***<u>The funnel</u>*-it directs water into the bottle.** ❖ ***<u>Water bottle</u>*-it collects the amount of rain water received.** ❖ ***<u>Measuring cylinder</u>*-it is used for measuring the amount of water collected in the bottle.** **Note:-***Rainfall is measured in <u>millimetres</u> in order to know the depth of water into the soil.*
A Barometer 	❖ **It is used to measure *air pressure.*** ❖ **Air pressure is measured in millibars.** ❖ **Measuring air pressure enables experts to predict storms.**
A Sunshine recorder 	❖ **It shows the duration of sunshine in a day.**

Hygrometer 	❖ **It is used to measure *humidity.*** ❖ **<u>Humidity</u> *is the amount of water vapour in the atmosphere.***
Six's thermometer 	❖ **It measures the highest and lowest temperatures of the day.**

A STEVENSON SCREEN.

	➢ **This is a wooden box in which delicate weather instruments are kept at a weather station.** ➢ **It protects weather instruments from rainfall and direct heat.** ➢ **The Stevenson screen is made of louvres to allow free air circulation in the box.** ➢ **It is painted white to enable it reflect sunlight.** ➢ **It is raised 1.5m above the ground to keep it free from splash water.** ➢ **It is made of wood to prevent it from absorbing heat.**

<u>Weather instruments kept in a Stevenson screen.</u>

- **Barometer**
- **Hygrometer**
- **Six's thermometer (Maximum and thermometer).**

<u>Note</u>

- ✓ *The above instruments are kept in a Stevenson screen in order to protect them from being destroyed since they are delicate.*
- ✓ ***The Ministry of Water and Environment*** *is responsible for monitoring weather and climate, and giving advice to the public on weather conditions in Uganda.*

CLIMATIC REGIONS/ZONES OF UGANDA.

- **<u>Climate</u> is the average weather condition of a place recorded for a long time.**
- **<u>Climatology</u> is the scientific study of climate.**
- ***<u>A climatologist</u>* is a scientist who studies climate.**

<u>Main aspects/ factors of climate.</u>

- **Rainfall**
- **Temperature.**

<u>Types of climate experienced in Uganda.</u>

- ❖ **Equatorial climate**
- ❖ **Tropical climate**
- ❖ **Semi-desert climate**
- ❖ **Montane climate**

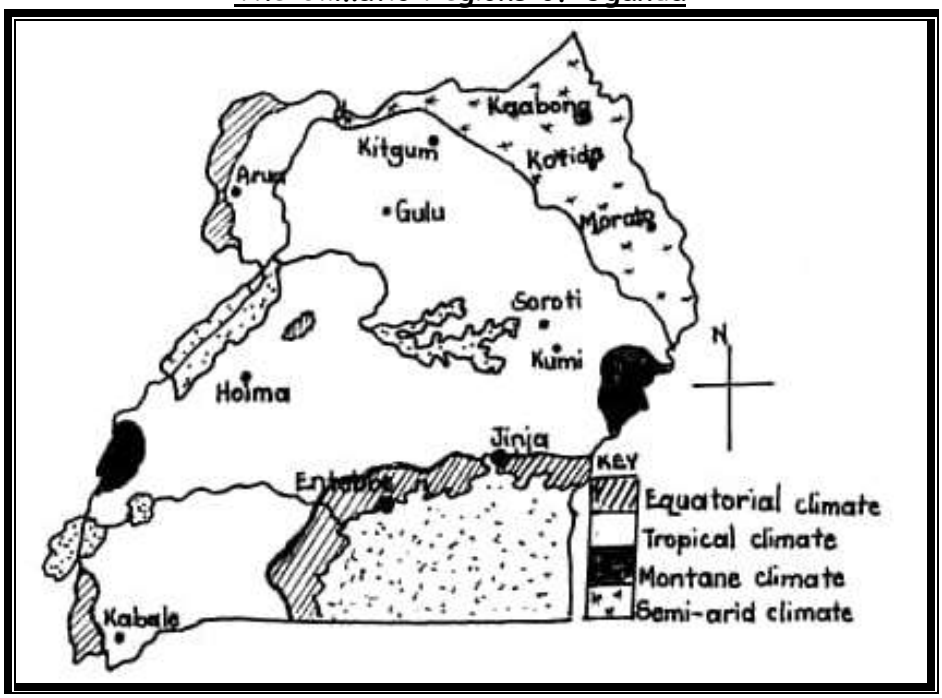
CLIMATIC REGIONS IN UGANDA.

A climatic region **is a large area that experiences the same / similar weather patterns.**

Climatic regions in Uganda.

- **Equatorial climatic region**
- **Tropical climatic region/ Savannah climatic zone**
- **Semi-desert climatic region/ savannah climatic zone.**
- **Montane climatic region/ mountain climatic zone**

The Climatic Regions of Uganda



THE EQUATORIAL CLIMATE

- **It is described as hot and wet throughout the year.**
- **It is experienced in areas along the Equator**

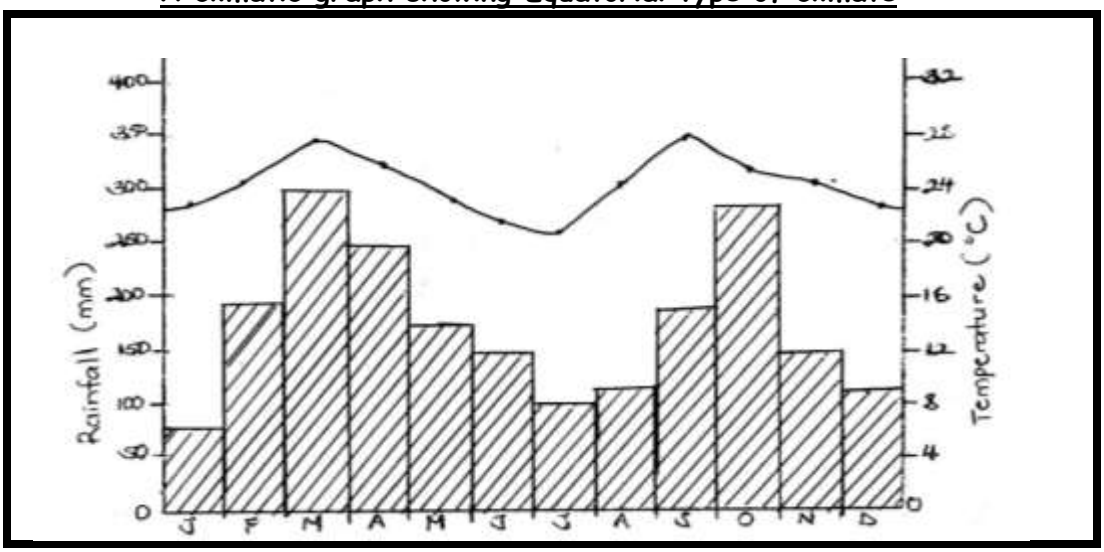
Characteristics of Equatorial Climate.

- **It is hot and wet throughout the year .**
- **It mainly receives convectional rainfall.(between 1500mm – 2000mm)**
- **Rainfall is accompanied by lightning and thunderstorms.**
- **It has no dry month.**
- **Temperatures are high especially during equinox .**
  The sun overheads the Equator twice a year on 21st March and 23rd September.
- **It has two heavy maximum rainfall seasons (double maxima).**

A climatic table showing Equatorial type of climate.

Months	J	F	M	A	M	J	J	A	S	O	N	D
Temp (^0C)	23	25	27	26	24	22	21	25	28	26	25	23
Rainfall(mm)	70	190	300	250	170	150	50	120	180	270	150	120

A climatic graph showing Equatorial type of climate



- **Note**:-*The increase in temperatures causes increase in the amount of rainfall received in the Equatorial climatic region.*

Areas in Uganda that experience Equatorial climate.

- **Shores of Lake Victoria**
- **The South Western part of Uganda.**

Districts that experience Equatorial climate.

- **Wakiso**
- **Buikwe**
- **Kalangala**
- **Jinja**
- **Mukono**
- **Mpigi**

Economic activities carried out in Equatorial climatic region

- **Crop growing**
- **Tourism**
- **Lumbering**

Crops grown in Equatorial climatic region.

- **Oil palm**
- **Coffee**
- **Cocoa**
- **Bananas**
- **Rubber**

Note:- *The above crops are commonly grown because they require plenty of rainfall for them to grow well.*

TROPICAL CLIMATE / SAVANNAH CLIMATE

- **Tropical climate is described as hot and wet.**
- **Tropical type of climate is experienced in the largest part of Uganda.**
- **This is because Uganda lies between the tropics (with in the tropical region).**

Districts that experience Tropical climate in Uganda.

- **Mubende.**
- **Soroti**
- **Kibale.**
- **Gulu**
- **Mbarara**
- **Luwero.**
- **Kitgum**
- **Sembabule.**

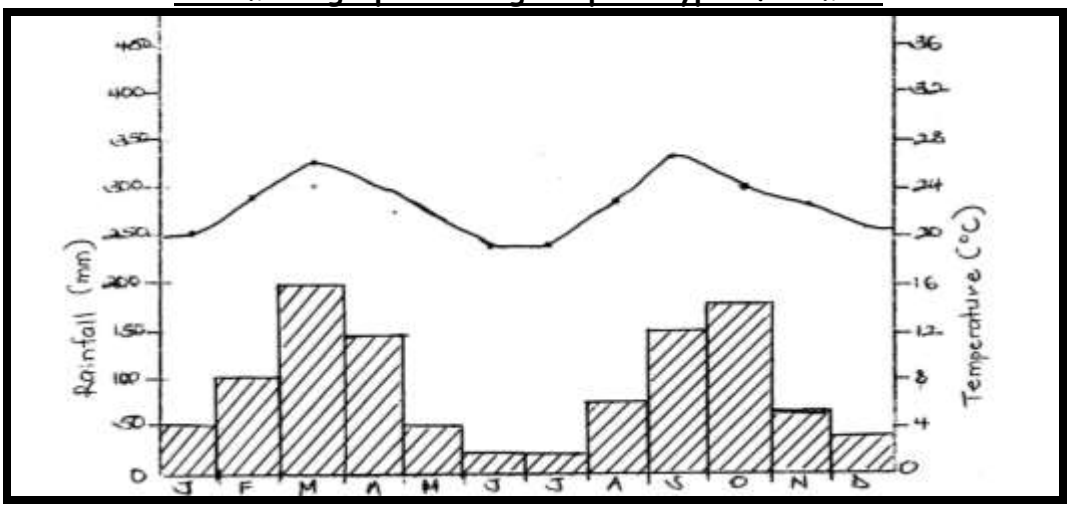
Characteristics of Tropical climate

- **Rainfall is mainly received when the sun is overhead the equator.**
- **It has two wet seasons and two dry seasons.**
- **Rainfall decreases as one moves far from the equator.**
- **Tropical type of climate is hot and wet.**

The climatic table showing Tropical type of climate.

Months	J	F	M	A	M	J	J	A	S	O	N	D
Temp. (°C)	20	23	26	24	22	18	19	23	27	24	23	21
Rainfall (mm)	50	110	200	140	50	25	25	75	150	175	60	40

A climatic graph showing Tropical type of climate



Economic activities commonly carried out in Tropical climatic region

- Crop growing
- Bee keeping
- Pastoralism
- Charcoal making.
- Tourism
- Lumbering

Common crops grown in Tropical climatic region

- Maize
- Sorgum
- Sorghum
- Cotton
- Simsim
- Ground nuts
- Beans
- Fruits like; jack fruits, oranges, mangoes, guavas

SEMI-DESERT CLIMATE/ SEMI-ARID CLIMATE.

- It is described as hot and dry.
- It is experienced in North Eastern part of Uganda.

Districts in Uganda that experience Semi-Desertclimate.

- Moroto
- Kaabong
- Kotido
- Nakapiripirit
- Abim

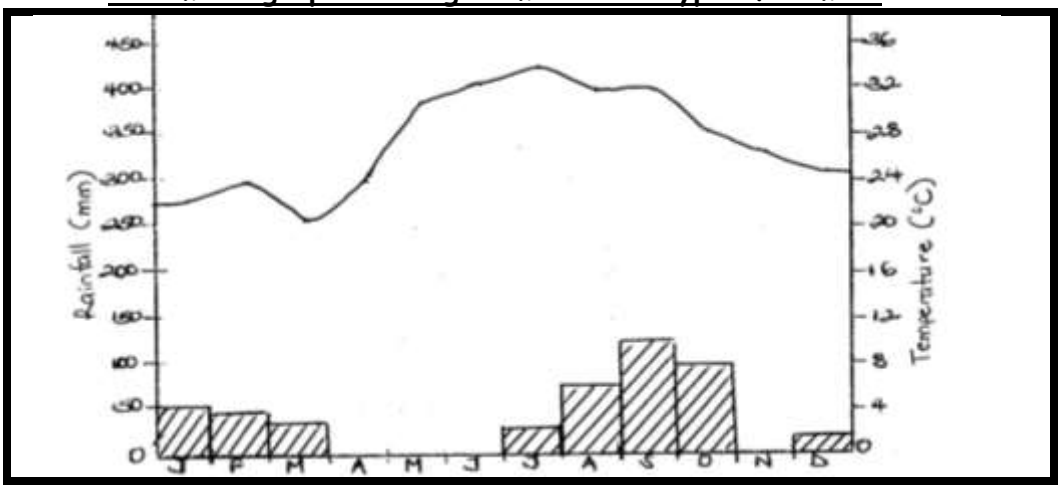
Characteristics of Semi-desert climate.

- It is hot and dry.
- There is low humidity.
- It has very hot days and cold nights.
- Skies are clear with little cloud cover.
- It receives low and unreliable rainfall.

A Climatic table showing Semi-desert type of climate.

Months	J	F	M	A	M	J	J	A	S	O	N	D
Temp (°C)	23	24	21	24	31	33	34	32	32	29	27	25
Rainfall (mm)	50	40	28	==	==	==	30	75	120	100	==	20

A climatic graph showing Semi-desert type of climate



Economic activities carried out in Semi desert climate.

- Pastoralism.
- Crop cultivation.
- Tourism.

MONTANE/MOUNTAIN CLIMATE.

- Montane climate is experienced in highland areas.
- Temperature reduces with the increase in altitude.
- Temperature reduces by 1°C for every 100 metres above the sea level.
- The wind ward side receives plenty of rainfall because it receives warm moist air.
- The lee ward side receives very little rainfall because it receives dry winds.

Some areas that experience Montane climate.

- Areas around mountain Rwenzori
- Areas around mountain Mufumbiro
- Areas around mountain Elgon

Districts in Uganda that experience Montane climate.

- Kasese
- Mbale
- Kabale
- Kanungu
- Sironko
- Kisoro
- Bundibugyo
- Bududa

Characteristics of Montane climate.

- It has cool temperature.
- Relief rainfall is mostly received.
- The wind ward side receives more rainfall than the lee ward side.

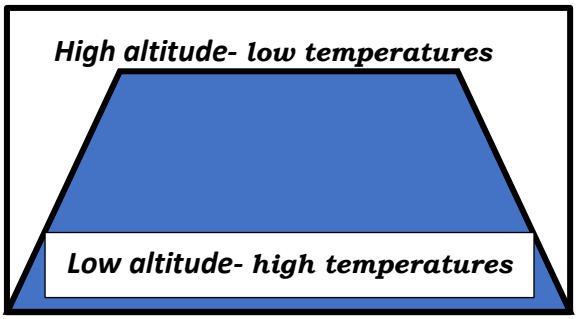
Economic activities commonly carried out in Montane climate.

- Tourism.
- Lumbering
- Crop growing.

FACTORS THAT INFLUENCE/ AFFECT CLIMATE OF AN UGANDA.

- Altitude.
- Nearness to water bodies/Drainage.
- Latitude.
- Wind movement.
- Vegetation cover.
- Human activities

(i) **Altitude**



- **Altitude** is the height above the sea level.
  - Temperature reduces with the increase in altitude.
- The lower parts of a mountain are warmer and have higher temperatures than the higher parts of the mountain.
- The higher the altitude, the cooler the temperature,and the lower the altitude, the hotter the temperature eg. Mbale is cooler than Kampala because Mbale is on a higher altitude than Kampala.

(ii) **Vegetation**

- Places with thick vegetation usually receive plenty of rainfall while those that have scanty vegetation usually receive very little rainfall.

Note:-*Vegetation modifies climate of an area by helping in the formation of convectional rainfall through transpiration.*

(iii) **Human activities**

- Some human activities affect climate positively while others affect climate of an area negatively.

Human activities that affect climate of an area positively.

- Afforestation
- Reafforestation
- Agro-forestry

Human activities that affect climate of an area negatively.

- Deforestation
- overgrazing
- Bush burning
- Swamp drainage
- Industrialisation

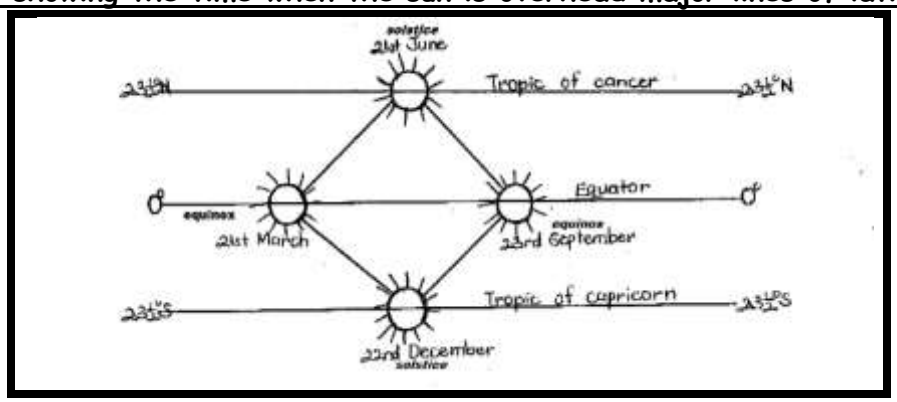
(iv) **Latitude.**

- **Latitude** is the distance in degrees North or South of the equator.
  - Areas which are near the Equator are hotter than those which are far away from the equator.
- Low latitude areas are areas which are near the equator, and are usually very hot.
- High latitude areas are areas which are far away from the Equator and are usually cool.
- Areas which are far away from the Equator are usually very cool because they receive slanting sun rays which travel a very long distance to the earth.

Note;

- *Most parts of Uganda are always hot because the sun is overhead Uganda throughout the year.*
- ***The Revolution of the earth*** *(in 365days) causes changes in seasons. ie. wet season and dry season.*
- ***Tropical region*** *is the area of land lying between the Tropic of cancer and Tropic of capricorn.*
- ***Equinox*** *is the time of the year when the sun is overhead the equator.*
- *The days and nights are always equal whenever the sun is overhead the equator.*
- *Very high temperatures are experienced around equinoxes.*
- ***Solstice*** *is the time of the year when the sun is overhead the tropics.*

A diagram showing the time when the sun is overhead major lines of latitude.



(v) Nearness to water bodies (Drainage)

- ❖ **Areas near large water bodies usually receive more rainfall than those which are far away from large water bodies.**

- **Areas near large water bodies usually receive convectional rainfall.**
- **Winds that blow over large water bodies pick a lot of moisture which rises and condenses to form convectional rainfall.**

Note: *-Water bodies modify climate by helping in the formation of convectional rainfall through evaporation.*

Characteristics of convectional rainfall

- **It is mostly received in the afternoon.**
- **It is usually accompanied by lightning and thunderstorms.**
- **It is mostly received in areas that experience a lot of evaporation and transpiration.**

(vi) Prevailing winds.

- ❖ **Areas that receive warm moist air receive plenty of rainfallwhile those that receive dry winds usually receive plenty of rainfall.**

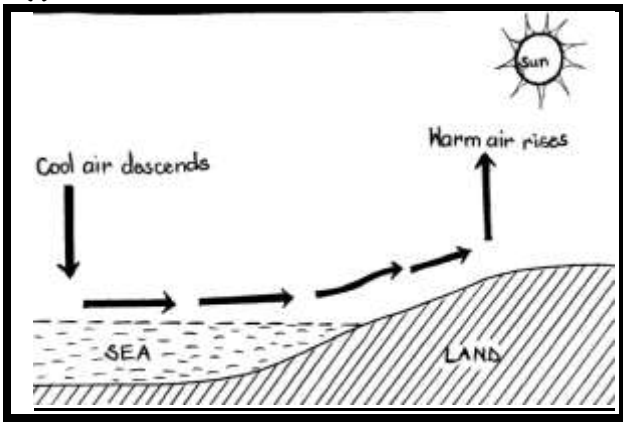
BREEZES.

- **A breeze is the movement of air from a cool region to a warm region.**

Types of breezes.

- **Sea breeze**
- **Land breeze**

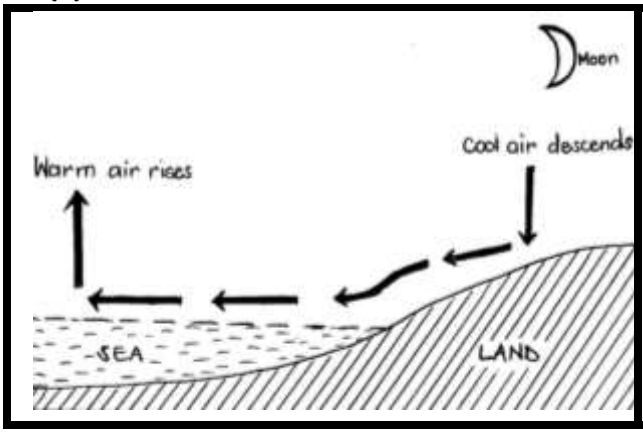
(i) Sea breeze



- ***This is the movement of cool air from the sea towards land.***
- **It takes place during the *day.***
- **During the day, the land is heated faster than water bodies.**
- **The warm air on land rises and cold air from the sea moves towards land to replace it.**

NB:- *Sea breezes help in formation of convectional rainfall.*

(ii) Land breeze



- This is the movement of cold air from land towards the sea.
- It takes place during the ***night.***
- At night, the land cools faster than the sea.
- The warm air from the sea where pressure is low rises and the cooler air blows from land towards the sea to replace it.

THE INFLUENCE OF CLIMATE ON HUMAN ACTIVITIES

a) Semi-desert climatic region (Dry areas)

Economic activities commonly carried out in Semi desert climate.

- Pastoralism.
- Tourism.
- Crop cultivation.

The influence of Semi-arid climate on human activities.

- ❖ People grow crops by irrigation.
- ❖ People grow fast maturing crops like maize, beans, millet, sorgum etc since their area receives short rainy seasons.
- ❖ People build simple huts.
- ❖ Pastoralism is mostly favour by the presence of a large vacant land.

Problems faced by people living in semi-desert climatic region.

- ❖ High temperatures during day time.
- ❖ Shortage of water.
- ❖ Poor transport.
- ❖ Shortage of pasture for animals.

Possible solutions to the problems faced by people living in desert areas.

- ❖ By digging valley dams to store water.
- ❖ By practising irrigation farming to increase food supply.
- ❖ By growing drought-resistant crops.
- ❖ By growing fast maturing crops.
- ❖ By painting houses with white in order to reflect sunlight.
- ❖ By dressing in light white clothes to reduce heat during day.

b) Equatorial and Tropical climatic region (Wet areas).

Economic activities commonly carried out in Equatorial and Tropical climate.

- Tourism.
- Crop growing.
- Lumbering

The influence of Equatorial and Tropical climate on human activities.

- ❖ Lumbering is done in the tropical rain forests.
- ❖ Tourism is favoured by the plenty of animals.

- ❖ Perennial crops are usually grown due to plenty of rainfall receive eg.coffee,oil palm,bananas,tea etc.
- ❖ People wear thick clothes to provide warmth during rainy and windy weather.
- ❖ People keep a variety of animals due to presence of pasture for animals.
- ❖ Houses are built with slanting roofs to allow easy flow of rain water off the roofs.

Problems faced by people living in Equatorial and Tropical regions.

- ❖ Floods
- ❖ Attacks from wild animals
- ❖ Poor ground transport.
- ❖ Presence of many disease vectors like tsetse flies, mosquitoes etc.

Possible solutions to the problems faced by people living equatorial and tropical climatic region

- ❖ By building houses with slanting roofs.
- ❖ By wearing rain coats and gum boots to safeguard against rainy weather.
- ❖ By creating more wildlife conservation areas.

c) Montane climate

Economic activities commonly carried out in Montane climate.

- ❖ Tourism.
- ❖ Crop growing.
- ❖ Lumbering

The influence of the montane climate on people.

- ❖ People build houses with slanting roofs.
- ❖ People rear donkeys for use as means of transport.
- ❖ People wear thick clothes to protect their bodies from much coldness.
- ❖ Thick forests promote lumbering in this climatic region.
- ❖ People grow perennial crops due to plenty of rainfall received.

Problems faced by people living in Montane climatic region.

- ❖ Poor transport network.
- ❖ Severe soil erosion
- ❖ Landslides.
- ❖ Much coldness

Possible solutions to the problems faced by people living in montane climatic region

- ❖ By building winding roads.
- ❖ By keeping donkeys for transport.
- ❖ By wearing thick clothes to overcome much coldness.
- ❖ By planting trees to reduce soil erosion and landslides.

NB: -*Plant roots control landslides in highland areas by holding the soil particles firmly.*

FARMING IN UGANDA.

- **Farming** is the growing of crops and rearing of animals.
- It is also called agriculture.
- Farming is the main economic activity carried out by most people in Uganda.

Types of farmng.

- ❖ Arable farming.
- ❖ Livestock farming.

Systems of crop farming.

- **Subsistence farming.**
- **Plantation farming.**

SUBSISTENCE FARMING.

- **This is the growing of crops and rearing of animals mainly for home use and the surplus is sold.**
- **It is the commonest system of farming practiced in Uganda. This is because subsistence farming is very cheap to practice.**
- **In this system of crop growing, annual crops are mainly grown eg. Beans, maize, cassava, peas, irish potatoes etc.**

Advantages of subsistence farming.

- **It is cheap to practice.**
- **It does not require a large piece of land.**
- **It promotes food security.**
- **It requires simple tools.**
- **It requires less labour force.**
- **It does not require a large piece of land.**

Disadvantages of subsistence farming.

- **A farmer earns less income.**
- **It leads to low productivity.**
- **It does not encourage economic development.**

MIXED FARMING.

- **Mixed farming is the growing of crops and rearing of animals on the same piece of land.**

Advantages of mixed farming.

- **Farmers gets double income.**
- **The farmer can get manure for his crops from animals.**
- **Animals can easily depend on crops for food.**
- **A farmer gets a balanced diet.**

Disadvantages of mixed farming.

- **It is expensive to start and manage.**
- **It requires skilled labour.**
- **Animals can easily escape and destroy the crops.**
- **It requires a large piece of land.**

PLANTATION FARMING.

- **This is the growing of one perennial crop on a large scale.**
- **Plantation farming is practised by very few people in Uganda because it is very expensive to practice.**
- **Under plantation farming, perennial crops are mostly grown eg. coffee, tea, cocoa, oil palm etc.**

Advantages of plantation farming.

- **It is a source of employment to people.**
- **It is a source of raw materials for industries.**
- **It is a source of income to the government through taxing plantation owners.**
- **It promotes the development of roads.**
  - **Note: -*Agro-based industries*** *are industries which use agricultural produce as their raw materials.*

Disadvantages of plantation farming.

- It is very expensive to carry out.
- It requires a large piece of land.
- Crops can easily be affected by drought.
- Pests and diseases can easily spread from one crop to another.
- It leads to soil exhaustion.

Examples of plantation crops.

- Tea.
- Coffee.
- Cloves.
- Sugarcane
- Cocoa.
- Cotton.
- Oil palm
- Sisal.

TEA.

Tea is a beverage crop.

Examples of plantations for tea.

- Kasaku tea plantation.
- Igara tea plantation.
- Nakigala tea plantation.

Tea growing districts.

- Mukono.
- Rukungiri.
- Kabalore.
- Bushenyi.
- Mubende.

Conditions for growing tea.

- Warm temperatures.
- Reliable rainfall.
- Acidic soils.

COFFEE.

- It is a beverage crop.
- It contains caffeine.

Types of coffee.

- Arabica coffee (grown in highlands).
- Robusta coffee (grown in low lands).
- Clonal coffee (improved robusta).

Advantages of growing clonal coffee over other types of coffee.

- It is more resistant to diseases than other types.
- It matures faster than other types.
- It gives more yields than other types.

Factors tha favour the growing of arabica coffee on the slopes of mountain Elgon.

- Presence of deep volcanic fertile soils.
- Presence of heavy rainfall received.

Note:

- ✓ *Coffee is harvested by hand picking of berries.*
- ✓ *Arabica coffee is mainly grown by the Bagishu on the slopes of mountain Elgon and the Bakonzo on the slopes of mountain Rwenzori.*

SUGARCANE

- **Sugarcane stems are crushed to get juice which makes sugar crystals.**

Sugarcane plantations in Uganda.

- **Kakira sugarcane plantation in Jinja.**
- **Lugazi sugarcane plantation in Buikwe.**
- **Kinyara sugar works in Masindi.**
- **Sango bay in Rakai.**

WHEAT.

- **It is a cereal crop which requires low temperature and heavy rainfall.**
- **Grain provide flour used in baking.**

Districts that grow wheat.

- **Kapchorwa.**
- **Kisoro.**
- **Bundibugyo.**

COTTON.

- **It is a fibre crop used in textile industries.**
- **It is grown using seeds and harvested by hand picking.**
- **It is taken to ginneries to remove seeds and remain with lint.**
- **The lint is processed into threads by spinning.**
- **Kenneth Borup was a missionary who introduced the fast growing cotton seeds in Uganda in 1903.**
- **Sir Hesketh Bell encouraged cotton growing in uganda.**

  Why the British colonialists encouraged cash crop growing in uganda.

  - **They wanted to get raw materials for their home industries.**
  - **They wanted the natives to get income and pay taxes.**
    - **Note:**
      - ✓*The introduction of synthetic fibres eg.Nylon has reduced the market for cotton hence leading to reduction in cotton production.*
      - ✓Textile industries areindustries that use cotton as their raw material eg. Nyanza Textile Imdustries Limited (NYTIL)

Cotton growing districts in Uganda.

- **Kasese.**
- **Iganga.**
- **Kamuli.**

Uses of cotton.

- **It is used for making threads.**
- **It is used for making clothes.**
- **It is used making cotton wool.**
- **Cotton seeds are used to make animal feeds.**

Problems faced by cotton growers.

- **Cotton pests and diseases.**
- **Harsh climate changes.**
- **Fluctuation of cotton prices.**
- **Competition from cotton growers.**

TOBACCO.

- **It is grown in West Nile.**
- **It is used to make cigarettes.**

- British America Tobacco (BAT) is the body responsible for marketing and processing tobacco.
- The introduction of the tobacco control bill has led to the reduction in tobacco production in West Nile.

OIL PALM.

- Oil palm is mainly grown in Kalangala by BIDCO oil company.
- Oil palm is used to get palm oil.

Products got from palm oil.

- Palm Wine
- Soap
- Cooking Oil
- Margarine
- Candles

Factors that favour oil palm growing.

- Presence of heavy rainfall.
- Presence of high temperature.
- Well drained fertile soils.

Note:

- *Harvested oil palm nuts are transported to Jinja for processing and Bidco cooking oil, Bidco washing soap and other products are obtained.*

TYPES OF CROPS.

- Traditional cash crops.
- Non-traditional cash crops.

(i) **TRADITIONAL CASH CROPS.**

- Traditional cash crops are crops which were originally grown for sale.

Examples of traditional cash crops.

- Coffee
- Tobacco
- Cocoa
- Sisal
- Cotton
- Tea
- Oil palm
- Rubber

Why people are encouraged to grow traditional cash crops.

- To promote export trade.
- To get raw materials for industries.

Products obtained/ made from different cash crops

Crop	*Product(s)*
Cotton	Clothes, cotton wool, threads
Pyrethrum	Insecticides
Oil palm	Palm oil used for making cooking oil, soap, margarine etc.
Tea	Tea leaves
Tobacco	Cigarettes
Sun flower	Cooking oil
Sisal	Ropes, strings, sacks
coffee	Coffee powder, gun powder.
Maize	Maize flour
Rubber	Latex for making gloves,balls, shoe soles, car tyres, erasers etc

(ii) NON-TRADITIONAL CASH CROPS.

- Non-traditional cash crops are crops which were originally grown for food but can now be sold.

Why the government is encouraging people to grow more non-traditiional cash crops.

- ❖ They have a large market.
- ❖ To promote food security in the country.

Examples of Non-traditional cash crops.

- ❖ Beans
- ❖ Maize
- ❖ Cassava
- ❖ Banana
- ❖ Yams
- ❖ Rice
- ❖ Ground nuts
- ❖ Soya beans
- ❖ Vegetables like cabbage

PERENNIAL CROPS.

- These are crops which take a long time to mature and are harvested several times.
- Most of the traditional cash crops are perennial.

Examples of perennial crops.

- ❖ Coffee
- ❖ Tea
- ❖ Rubber
- ❖ Cocoa
- ❖ Mango plants
- ❖ Oil palm
- ❖ Sisal

ANNUAL CROPS.

- These are crops which take a short time to mature and are harvested once.

Examples of annual crops.

- ❖ Maize
- ❖ Beans
- ❖ Rice
- ❖ Cotton
- ❖ Tobacco
- ❖ Millet
- ❖ Sorghum
- ❖ Cassava
- ❖ Peas

IRRIGATION FARMING IN UGANDA.

- Irrigation is the artificial supply of water on land to support plant growth.
- Irrigation farming is the system of crop growing in which land is supplied with water by human means to support crop growth.
- Irrigation scheme is an area of land which is supplied with water by human means to support crop growth.
- Irrigation schemes are mostly set up in areas that do not receive reliable rainfall (dry areas).
- These areas must be having reliable permanent sources of water.
- Irrigation farming is not well developed in North Eastern uganda because the area has few reliable permanent sources of water.

Irrigation schemes in Uganda.

- Doho irrigation scheme for rice
- Tilda (Kibimba) irrigation scheme.
- Kiige irrigation scheme for citrus fruits.
- Ongom irrigation scheme in Lira for citrus fruits.
- Olweny swamp irrigation scheme in Lira for rice
- Nsimbe and Rosebud irrigation schemes for flowers.

Irrigation scheme	*Source of water*	*District / country*	*Crops grown*
Doho	**R. Manafwa**	**Butaleja**	**Rice.**
Mubuku	**R. Mubuku And R. Sebwe**	**Kasese**	**Vegetables, maize**
Tilda (Kibimba)	**R. Mpologoma**	**Bugiri**	**Rice**
Sango Bay	**L. Victoria**	**Rakai**	**Sugarcanes and Maize**
Kakira	**L. Victoria**	**Jinja**	**Sugarcanes**
Lugazi	**L. Victoria**	**Buikwe**	**Sugarcanes**
Pabo	**R. Achwa**	**Kitgum**	**Rice**
Kiige	**L. Nabigaga**	**Kamuli**	**Citrus fruits**
Agoro	**R. Agago**	**Lamwo**	**Tomatoes, Okra, Maize**

Common methods of Irrigation.

- **Gravity flow method**
- **Overhead sprinkler method**

Advantages of Irrigation farming.

- **Crops are grown at any time of the year.**
- **It promotes food security in the country.**
- **Irrigation farming helps to put idle dry land into use.**
- **Crops grow well without being affected by sunshine.**

Disadvantages of Irrigation farming.

- **It is very expensive to practice.**
- **It is not possible where there is no reliable source of water.**
- **It leads to soil leaching.**

Note:-*Leaching* *is the sinking of soil nutrients to deeper layers where plant roots can not reach.*

Ways of caring for crops in the garden.

- **By weeding them.**
- **By thinning.**
- **By pruning them.**
- **By watering the crops.**

Factors that have promoted farming in Uganda

- **Presence of fertile soils.**
- **Presence of reliable rainfall.**
- **Availability of ready market for agricultural produce.**
- **Improved transport and communication network.**
- **Political stability in an area.**
- **Availability of ready market for agricultural produce.**
- **Presence of large labour force.**

Importance of farming.

- **It is a source of food to people.**
- **It is a source of raw materials for industries.**
- **It has promoted the development of roads and railways.**
- **It is a source of employment to people.**
- **It is a source of revenue to the government.**

Problems faced by farmers.

- **Shortage of funds/ limited capital.**
- **Prolonged drought.**
- **Outbreak of crop pests and diseases.**
- **Limited market for farm produce.**

- **Poor transport network.**
- **Political instability in some parts of the country.**
- **Shortage of land for crop growing in some areas eg in towns.**
- **Changes in prices/unstable prices for agricultural produce.**
- **Rural-urban migration which reduces labour force on farms in rural areas.**

Possible solutions to the problems affecting agricultural development in Uganda.

- **By giving soft loans to farmers.**
- **By spraying the crops with insecticides.**
- **By teaching farmers better farming methods.**
- **The government should set minimum prices for crop products.**
- **By building better roads in the country.**
- **By encouraging the use of irrigation farming.**

Note:

- ✓ *The government introduced developmental programmes such as National Agricultural Advisory Services (**NAADs**) and Operation wealth creation to help farmers to improve their lives.*
- ✓ *NAADs is working under the Ministry of Agriculture, Animal industry and Fisheries.*
- ✓ *The government also set up the National Agricultural Research Organisation **(NARO)** to carry out research on how to improve farming activities.*

LIVESTOCK FARMING IN UGANDA.

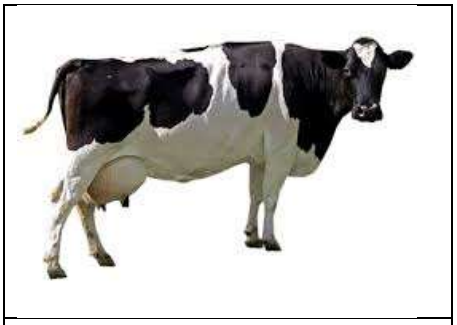
- **Pastoralism is the rearing of cattle on a large scale.**
- **Livestock farming is also called pastoralism.**

Systems of livestock farming.

- **Dairy farming.**
- **Nomadic pastoralism.**
- **Cattle ranching.**

DAIRY FARMING.

- **Dairy farming is the rearing of cattle on a large scale mainly for milk production.**
- **Cows are mainly reared in this system of pastoralism.**
- **It is commonly carriedout in the cool mountainous areas.**
- **Dairy farms in Uganda commonly found in Kisoro and Kabale.**



A Dairy cow

Products from a dairy farm.

- **Milk.**
- **Meat (beef).**
- **Hooves**
- **Hides.**

Milk products.

- **Cheese.**
- **Ice cream.**
- **Butter.**
- **Yoghurt.**
- **Ghee.**

RANCHING.

- **Ranching is the rearing of cattle on a large scale mainly for beef production.**
- **Bulls are mainly reared in this system of livestock farming.**

Products obtained from a ranch.

- Beef.
- Hooves.
- Horn tips.

Examples of ranches in Uganda.

- Kisozi ranch (Gomba district).
- Singo ranch
- Zziwa ranch
- Kabula ranch in Sembabule.
- Nyabushozi in Kiruhura.
- Buruli in Nakasongola.

A bull on a ranch

NOMADIC PASTORALISM.

- Nomadic pastoralism is the system of animal rearing where farmers move with their animals from one place to another in search for pasture and water.
- It is mainly carried out in semi-arid areas.
- Nomadism is commonly practiced by Karimojongs in the North Eastern Uganda.

Examples of pastoral tribes in Uganda.

- Karimojongs.
- Bahima.

Districts where nomadic pastoralism is practiced.

- Moroto district.
- Kotido district.
- Nakapiripirit district.

A Karimojong herdsman

Reasons why pastoralists move from one place to another.

- To look for pasture for their animals.
- To look for water for their animals.
- To break the lifecycle of disease vectors.

Problems faced by the pastoralists in Uganda.

- Cattle rustling.
- Poor breeds of cattle.
- Shortage of water for animals.
- Shortage of pasture.
- Outbreak of animal diseases.
- Poor veterinary services

Possible solutions to the problems facing pastoralists in Uganda.

- Disarming cattle rustlers.
- Constructing valley dams to provide water for animals.
- Growing fodder crops to provide food to animals.
- By extending veterinary services to the pastoral tribes.
- By encouraging pastoralists to keep a limited number of animals.

Testing Exercise.

1. Give the meaning of each of the following;
   (i) Climate
   (ii) Weather
2. Mention any four elements of weather.
3. Match the weather instruments in list A to their uses in list B correctly
   (i) Wind vane measures humidity.
   (ii) Rain gauge measures the speed of wind.
   (iii) Hygrometer shows the direction of wind.
   (iv) Anemometer measures the amount of rainfall.
4. When Sarah went to a weather station, she saw an arrow of a wind vane pointing to the North. From which direction was wind blowing?
5. Mention any four types of climate experienced in Uganda.
6. Which aspect of climate mainly influences the settlement of people in an area?
7. How is the Equatorial type of climate described?
8. State any two characteristics of each of the following types of climate.
   (i) Equatorial climate.
   (ii) Tropical climate.
   (iii) Semi-desert climate.
9. Mention any two economic activities that are commonly done in the Equatorial type of climate.
10. State the major economic activity carried out by most people in North Eastern Uganda.
11. Mention any four factors that influence the climate of Uganda.
12. Give the meaning of the term Altitude.
13. How does altitude influence the climate of an area?
14. Mention any three human activities that negatively affect the climate of an area.
15. State the effect of the revolution of the earth.
16. Mention the two months of the year when equinox is experienced.
17. How do lakes and rivers help to improve climate of an area?
18. State any two characteristics of convectional rainfall.
19. How can crop growing be made possible in semi-arid areas of Uganda?
20. Mention any two economic activities that are commonly carried out in Montane climatic region.
21. How does climate affect people's way of dressing?
22. Ho does climate affect the style of building in Equatorial climatic region.
23. Mention any two problems facing people living in montane climatic region.
24. Give any two ways crop production can be improved in Semi-arid areas of Uganda.
25. How are donkeys useful to people of Kapchorwa district?
26. Mention the best way of controlling landslides in mountainous areas.
27. Why do most farmers in Uganda practice subsistence farming? Give any two reasons?
28. state any two advantages of subsistence farming.
29. Name the major cash crop grown in West Nile sub-region.
30. Mention any two products obtained from Latex.
31. Name the crop raw material used for making insecticides.
32. State any two factors that favour oil palm growing in Kalangala district.

33. What is Irrigation farming?
34. Complete the table below correctly.

Irrigation scheme	Crop	Water source.
Kiige	----------	----------
Doho	----------	River Manafwa
----------	Rice	River Mpologoma
Mubuku	----------	----------

35. State any two advantages of irrigation farming.
36. How has crop cultivation promoted industrial development in Uganda?
37. State any three problems facing farmers in Uganda.
38. Give one way the government can help to improve the lives of farmers in our locality.
39. Write NAADs in full.
40. Mention one tribe that carries out out pastoralism as its major occupation.
41. Give any two reasons why the above tribe lives a nomadic way of life.
42. State any two problems faced by pastoralists in Uganda.
43. How are valley dams useful to people of North Eastern Uganda?
44. Mention any two products obtained from a dairy farm.
45. Give one way the government has helped the Kariomojongs to live a settled life.

TOPIC 4: **VEGETATION OF UGANDA.**

INTRODUCTION TO VEGETATION

- Vegetation is the plant life cover of an area.

Types of vegetation.

- ❖ Natural vegetation
- ❖ Planted vegetation

(i) PLANTED VEGETATION.

- Planted vegetation is the plant life cover of an area that is planted by man.

Examples of planted vegetation.

- ❖ Planted forests
- ❖ Planted grass eg.paspalum
- ❖ Planted flowers
- ❖ Crops

Planted forests

- A forest is a group of trees growing together on the same piece of land.
- Planted forests are groups of trees that grow by the help of man.
- Planted forests are usually planted by man.

Examples of planted forests.

- ❖ Magamaga forest in Mayuge
- ❖ Katuugo forest in Nakasongola
- ❖ Butamira in Jinja
- ❖ Bugamba in Mbarara.
- ❖ Mafuga forest in Rukungiri
- ❖ Lendu forest in Nebbi (the largest in Uganda)
- ❖ Nyabyeya forest in Masindi

Characteristics of planted forests.

- ❖ Trees are planted in rows
- ❖ Trees mainly produce soft wood.
- ❖ Trees are well spaced.
- ❖ Trees are of the same species.
- ❖ Tees mature almost at the same time.

Examples of tree species that commonly grow in planted forests.

- ❖ Pine
- ❖ Cedar
- ❖ Spruce
- ❖ Fir
- ❖ Eucalyptus
- ❖ Cypress.

Uses of some tree species that are commonly planted

- ✓ Ficus tree (mutuba tree)- it is used for making bark cloth.
- ✓ Rubber tree-it provides latex used for making rubber balls, erasers, car tyres, shoe soles, gum boots, gloves, elastic bands etc.
- ✓ Grape tree-it provides grapes used for making wine.
- ✓ Oil palm-it provides palm oil used for making cooking oil, margarine, soap, candles etc.
- ✓ Wattle tree-it provides tannin used for softening leather/ animal skins.
- ✓ Mulberry-it is used for making drugs eg. quinine

Products commonly obtained from soft wood

- ❖ Match boxes
- ❖ Match sticks
- ❖ Papers
- ❖ Pencils
- ❖ Ply wood
- ❖ Wooden rulers
- ❖ Toilet papers
- ❖ Soft boards.

Importance of flowers.

- They are a source of income when sold.
- They are used for decoration.
- They are used to give respect to the dead.
- They are used TO express love.

(ii) NATURAL VEGETATION.

- ***Natural vegetation*** is the plant life cover of an area that grows on its own.
- It includes all plants in the environment that grow without the influence of man.

Examples of natural vegetation.

- Natural forests
- Grasslands
- Shrubs
- Swamp vegetation
- Thickets
- Natural flowers
- Bushes

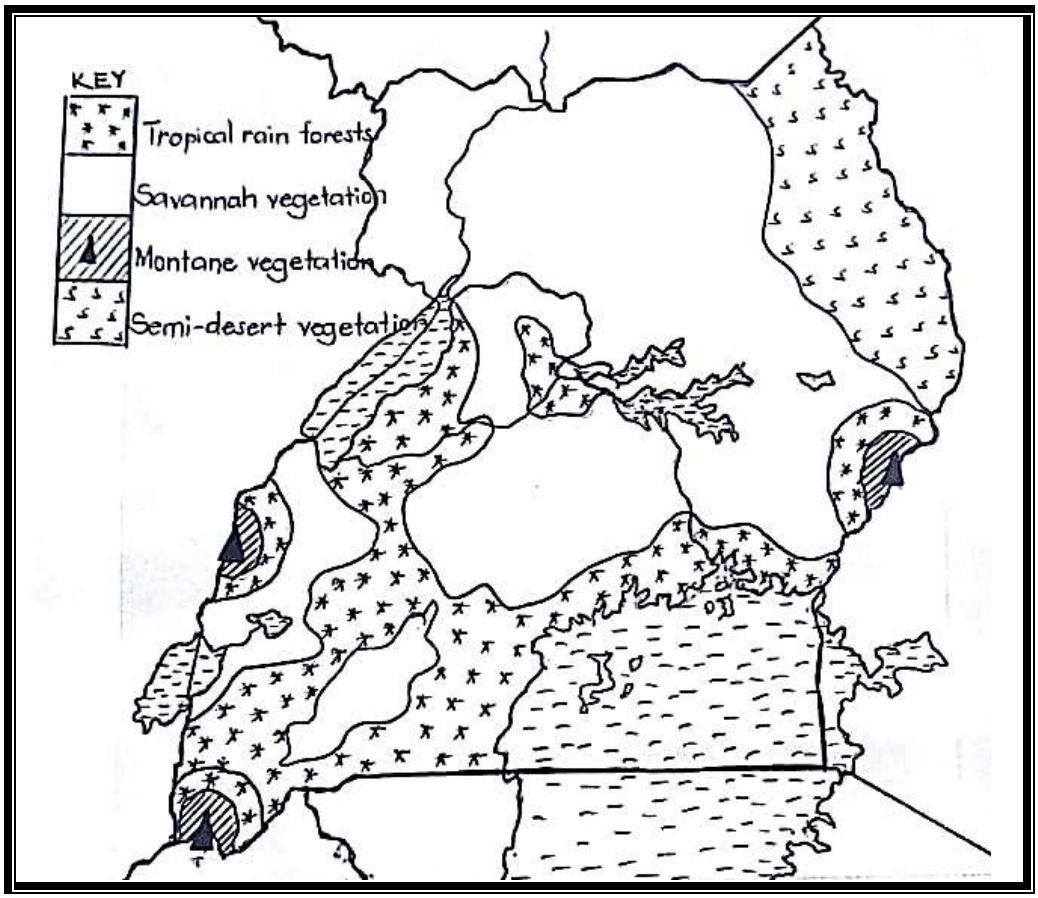
TYPES OF NATURAL VEGETATION/VEGETATION ZONES IN UGANDA.

A vegetation zone is an area under the same kind of plant life cover.

Examples of vegetation zones in Uganda.

- Equatorial rain forests/tropical rain forests.
- Savannah vegetation.
- Semi-desert vegetation.
- Montane vegetation.

VEGETATION ZONES IN UGANDA.



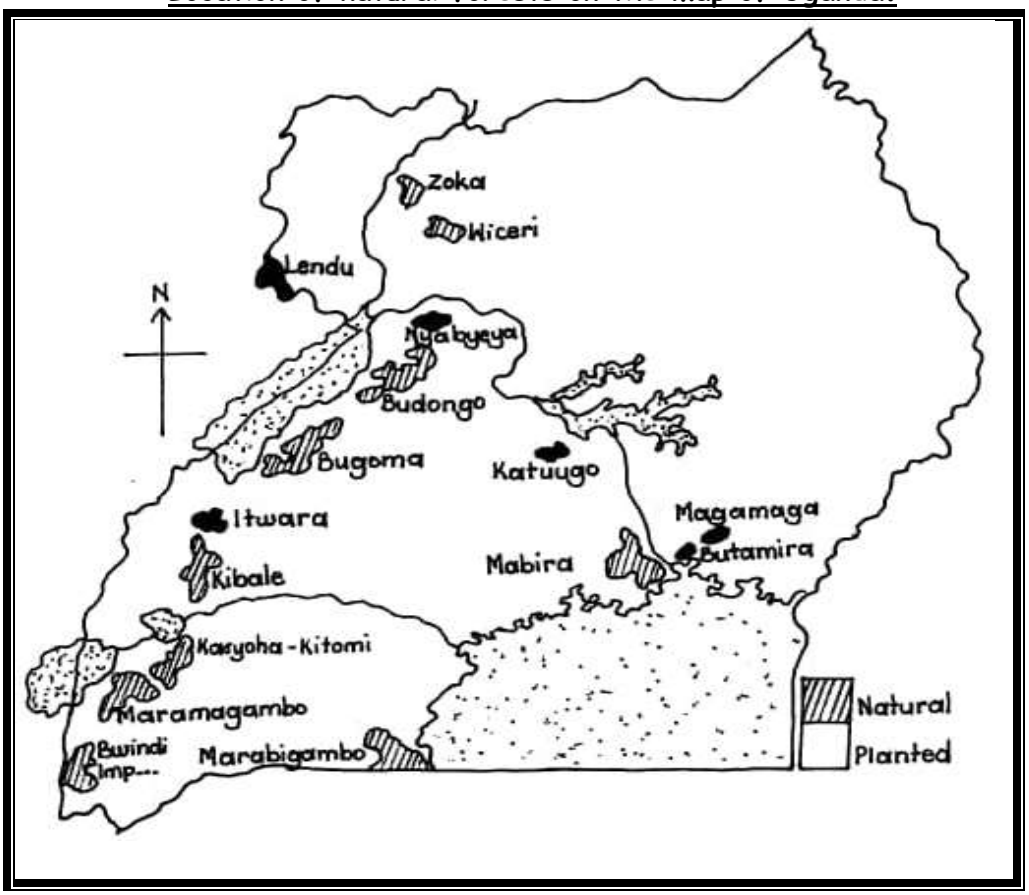
a) EQUATORIAL RAIN FORESTS

- Equatorial type of vegetation is described as ever green.
  These forests are ever green because they grow in areas that receive plenty of rainfall.
- Equatorial rain forests are also called the <u>Tropical rain forests.</u>
- They are called rain forests because they grow in areas that receive plenty of rainfall.
- Tropical rain forests mainly grow in areas which experience Equatorial climate, on the shores of Lake Victoria and in the South Western part of Uganda.

<u>Examples of natural forests in Uganda</u>

Forest	*District*
❖ Budongo (the largest)	❖ Masindi
❖ Mabira	❖ Buikwe
❖ Malabigambo	❖ Rakai
❖ Maramagambo	❖ Rubirizi and Mitooma
❖ Bugoma	❖ Hoima
❖ Mountain Rwenzori forest	❖ Kasese
❖ Kibale forest	❖ Kibale
❖ Ssese forest	❖ Kalangala
❖ Wiceri forest	❖ Amuru

<u>Location of natural forests on the map of Uganda.</u>



Characteristics of natural forests.

- ❖ **Trees are ever green. (they don't shed their leaves).**
- ❖ **Trees are of different species.**
- ❖ **Trees have broad leaves.**
- ❖ **Trees grow very tall due to phototropism (to get sunlight).**
- ❖ **Trees have buttress roots.**
- ❖ **Trees have hard wood.**
- ❖ **Trees take a long time to mature.**
- ❖ **Trees form a canopy (a layer of branches and leaves that form a cover to the ground).**
- ❖ **They have a thick undergrowth. This makes them impenetrable.**

Note:

- ✓ ***Deciduous trees*** *are trees that shed their leave during the dry season.*
- ✓ ***A canopy*** *is an umbrella-like structure formed by trees in tropical rain forests.*

Common tree species in Equatorial rain forests.

- **Mahogany**
- **African walnut**
- **Ebony**
- **Teak**
- **Green heart**
- **Rose wood**
- **Mvule trees (Iroko)**

Economic activities commonly done in Equatorial rain forests.

- **Lumbering**
- **Charcoal making.**
- **Herbal medicine collection**
- **Fruit gathering.**
- **Tourism**

Products obtained/ got from hard wood.

- ❖ **Wooden tables**
- ❖ **Wooden desks**
- ❖ **Wooden chairs**
- ❖ **Benches**
- ❖ **Wooden windows**
- ❖ **Wooden doors**
- ❖ **Cupboards**

Importance of forests.

- ❖ **Forests help in formation of convectional rainfall through transpiration.**
- ❖ **They are source of income through tourism.**
- ❖ **They act as a habitat for wild animals.**
- ❖ **They are source of herbal medicine.**
- ❖ **They help to reduce soil erosion.**
- ❖ **They are source of timber.**

Problems facing forests

- ❖ **Deforestation.**
- ❖ **Oubreak of bush fires.**
- ❖ **Human encroachment on forests.**

DEFORESTATION

- **Deforestation is the massive cutting down of trees without replacement.**
- **Lumbering is the cutting down/felling of mature trees for production of timber.**

Reasons why people cut down trees/ carry out deforestation.

- ❖ To get land for settlement
- ❖ To get land for crop growing.
- ❖ To get land for constructing roads.
- ❖ To get land for building industries.
- ❖ To get timber.
- ❖ To get wood fuel.
- ❖ To get land for constructing flat play grounds.

Dangers / effects of deforestation.

- ❖ It leads to soil erosion.
- ❖ It leads to desertification/ drought.
- ❖ It destroys the natural habitat for animals.
- ❖ It leads to displacement of wild animals.
- ❖ It leads to extinction of some tree species.
- ❖ It reduces the amount of rainfall received in an area.

FOREST CONSERVATION.

- Forest conservation is the act of protecting forests from extinction.

Ways of conserving forests.

- ❖ By practising afforestation.
- ❖ By practising reafforestation.
- ❖ By practising agro-forestry
- ❖ By teaching people on the importance of forests.
- ❖ By educating people about the dangers of deforestation.
- ❖ Through rural electrification. (extension of electricity to rural areas)

➢ **Note:**

- ✓ ***Afforestation*** *is the planting of trees on a large scale where they have never been/ existed.*
- ✓ ***Reafforestation*** *is the planting of trees on a large scale where they have ever been/ existed.*
- ✓ ***Agro-forestry*** *is the growing of crops together with useful trees on the same piece of land.*
- ✓ ***Forestry*** *is the practice of planting and caring for forests.*
- ✓ ***National Forestry Authority (NFA)*** *is the body that is responsible for conservation of forests in Uganda.*
- ✓ ***National Environment Management Authority (NEMA)*** *is the body responsible for conservation of the environment in Uganda.*

Roles of NFA.

- ❖ It teaches people about the importance of forests.
- ❖ It enforces laws against deforestation.
- ❖ It creates forest reserves.
- ❖ It evicts people settling in forest reserves.

b) SEMI-DESERT VEGETATION

- ***A desert*** is a large dry area of land with few plants growing on it.
- Semi-desert vegetation is mainly found in some parts of North Eastern Uganda.
- It grows in an area that experiences semi-desert type of climate.
- Plants that survive in very dry conditions mainly grow in this climatic region.
- Semi-desert vegetation has few trees because it receives very little rainfall.

- Trees in semi-desert vegetation have thick barks and thin leaves to reduce the rate of transpiration.
- Some plants in this area shed leaves to reduce on the rate of transportation.
- *Cactus* is able to survive in semi-desert conditions because it stores water in its stem.

Characteristics of Semi-desert vegetation

- ❖ Trees have thick barks.
- ❖ Trees are scattered.
- ❖ It has very short grass.
- ❖ Trees are short and thorny.
- ❖ Trees have long roots to tap underground water.
- ❖ Trees have thin leaves that reduce the rate of transpiration.
- ❖ Vegetation is scanty and resistant to drought.

Common plants in Semi-desert vegetation.

- Cactus
- Baobab
- Poppies
- Acacia

Districts in Uganda that have Semi-desert vegetation

- Kotido
- Moroto
- Kaabong
- Abim
- Nakapiripirit
- Napak
- Karenga

Note: -***Pastoralism*** *is the major economic activity carried out in Semi-desert vegetation.*

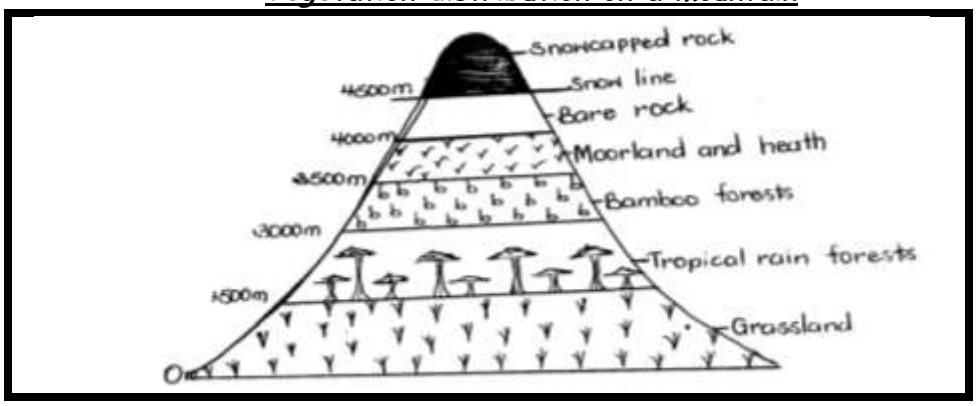
c) MOUNTAIN VEGETATION

- It is also called montane vegetation
- It is found in mountainous areas
- Vegetation changes with increase in altitude.
- Montane vegetation is mainly found on the slopes of mountains Rwenzori and Elgon.

Factors that cause vegetation variation in mountainous areas.

- Altitude
- Temperature
- Rainfall distribution.

Vegetation distribution on a mountain



Note;-***Heath*** *is the low evergreen rough grass.*
-***Moorland*** *is an area of highland covered with heath.*

Characteristics of montane vegetation.

- ❖ Trees are ever green
- ❖ Trees grow tall and straight.
- ❖ The mountain tops have few plants due to low temperatures.

- ❖ The foothills have savannah grasslands.
- ❖ Vegetation grows in zones according to altitude.

Economic activities commonly carried out in montane vegetation.

- ❖ Lumbering
- ❖ Cattle keeping/ pastoralism.
- ❖ Bee keeping
- ❖ Herbal medicine collection.
- ❖ Fruit gathering
- ❖ Charcoal making.

d) SAVANNAH VEGETATION

- Savannah vegetation is the name given to the Tropical grasslands of Uganda.
- Savannah vegetation covers the largest part of Uganda.
- Savannah vegetation is located in the Tropical climatic region of Uganda.

Savannah vegetation is divided into;

- Savannah grasslands / dry savannah vegetation
  It has short grass and few scattered trees.
- Savannah woodland / wooded savannah / wet savannah vegetation
  It has tall grass and many trees.

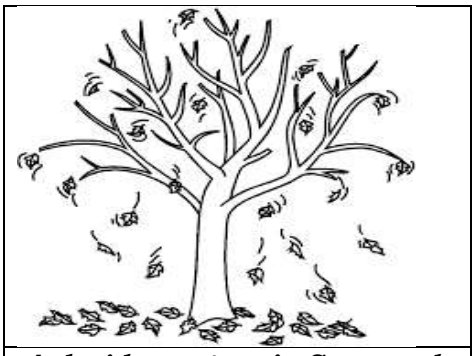
Note;

- ✓ *Most parts of Uganda are covered by* ***savannah grasslands.***
- ✓ *Most game parks in Uganda are located in savannah grasslands because there is plenty of pasture for animals.*

Characteristics of Savannah vegetation

- ❖ It has tall grass.
- ❖ It has scattered trees.
- ❖ Trees have long roots which they use to tap underground water.
- ❖ Grass appears green during the wet season.
- ❖ Trees usually shed their leaves during the dry season. (in order to reduce the rate of transpiration)

Note: -***Deciduous trees*** *are trees that shed their leaves during the dry seasons.*



A deciduous tree in Savannah vegetation

Districts in Uganda that have Savannah vegetation.

- Gulu
- Kitgum
- Mubende
- Soroti
- Mbarara
- Luwero
- Nakasongola etc.

Common tree species in savannah vegetation.

- Acacia
- Baobab

Economic activities commonly done in savannah vegetation

- Tourism
- Pastoralism
- Bee keeping

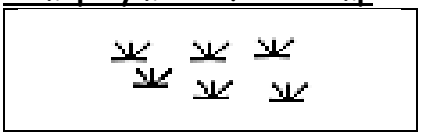
Note:

- ✓ *Tourism is favoured by a big number of game parks.*
- ✓ *Animal rearing is favoured by the plenty of pasture for animals.*

SWAMP VEGETATION

- **A swamp is a water logged area with vegetation.**
- **Or. A swamp is an area that has vegetation and plenty of water.**
- **Swamps are sometimes referred to as wetlands.**
- **Swamps are found along rivers, lakes and valleys.**

A map symbol of a swamp



Examples of swamp vegetation

- **Papyrus**
- **Palm trees**

Economic activities commonly carried out in swampy areas.

- **Crop growing**
- **Fishing**
- **Mining**
- **Tourism**
- **Pottery**
- **Brick making .**

Swamp resources/ craft raw materials got from swamps.

- ✓ **Papyrus reeds-used for making baskets, mats, hats etc**
- ✓ **Palm leaves-used for making mats etc.**
- ✓ **Clay-used for making products like cups, plates, pots etc**
- ✓ **Sand-used for building.**

Common crops grown in swamps

- **Rice**
- **Yams**
- **Vegetables**
- **Sugarcane.**

Importance of swamps.

- **They are a source of water.**
- **They are a source of fish eg. Mud fish.**
- **They are a source of minerals eg. Sand**
- **They are habitats for aquatic animals eg. Crocodiles, hippopotamuses, frogs etc.**
- **They help in formation of convectional rainfall.**
- **They help to filter water. (they have spongy-like roots which help to filter water)**
- **Swamps help to control floods.**
- **They are a source of raw materials for craft work eg. Papyrus reeds, palm leaves etc.**
- **They attract tourists who bring in income.**

Ways people misuse swamps.

- **By dumping industrial wastes in swamps.**
- **Through uncontrolled harvesting of papyrus reeds.**
- **By burning swamp vegetation.**
- **Through swamp drainage.**

Note:

- ✓ ***Swamp drainage*** *is the removal of water from swamps.*
- ✓ ***Swamp reclamation*** *is the act of changing a swamp from its natural state for other uses.*
- ✓ ***Swamp encroachment*** *is the illegal settlement in swamps.*

How people drain swamps.

- ❖ By adding murram in swamps.
- ❖ By digging channels in swamps.

Reasons why people drain swamps.

- ❖ To get land for crop growing.
- ❖ To get land for settlement.
- ❖ To get land for constructing industries.
- ❖ To construct roads.

Dangers of draining swamps.

- ❖ It leads to drought/ desertification.
- ❖ It leads to death of aquatic animals.
- ❖ It leads to floods.
- ❖ It leads to displacement of aquatic animals.
- ❖ It leads to reduction in craft raw materials.

Problems faced by people living near swamps.

- ❖ Floods during the rainy season.
- ❖ Attacks from disease vectors that live in swamps.
- ❖ Attacks from aquatic animals.
- ❖ Poor road transport.

VEGETATION DISTRIBUTION IN UGANDA.

- **Vegetation distribution** is the way plant life is spread in an area.
- Some parts of Uganda have thick vegetation while others have scanty / scattered vegetation.

Factors that influence/ affect vegetation distribution in Uganda.

- Altitude
- Drainage system
- Rainfall distribution / climate.
- Human activities
- Nature of soils

How the above factors affect vegetation distribution in Uganda.

Climate / Rainfall distribution

- Areas which receive plenty of rainfall have thick vegetation while those that receive very little rainfall have scanty vegetation.

Drainage system

- Areas near large water bodies have thick vegetation while those that are far away from large water bodies have scanty vegetation.

Altitude.

- Areas of low altitude have thick vegetation while those of high altitude have very little vegetation.

Nature of soils / Soil fertility.

- Areas with fertile soils have thick vegetation while those with infertile soils have scanty vegetation.

Human activities

- Some human activities promote the growth of vegetation while others destroy vegetation of an area.

Human activities that destroy vegetation.

- Deforestation
- Overcultivation
- Swamp drainage.
- Overgrazing
- Bush burning

Note:

- ✓ *Deforestation, bush burning and over grazing cause soil erosion.*
- ✓ *Deforestation and bush burning lead to displacement of wild animals, prolonged drought and also destroy the natural beauty of the environment.*

Qn: ***How does deforestation cause soil erosion?***

- *It leaves the land bare exposing it to agents of soil erosion.*

Human activities which promote the growth of vegetation.

- **Afforestation**
- **Reafforestation**
- **Agro-forestry**
- **Rotational grazing**

THE INFLUENCE OF VEGETATION ON ANIMALS.

ANIMAL DISTIBUTION IN DIFFERENT VEGETATION ZONES.

a) Equatorial Rain Forests.

- ❖ **There are tall trees that provide shelter to climbing animals.**
- ❖ **There are few herbivorous animals due to little grass.**
- ❖ **There are many climbing animals which feed on fruits in this zone.**

Common animals in Equatorial rain forests.

- **Baboons**
- **Mountain gorillas**
- **Monkeys**
- **Chimpanzees**

Why climbing animals are common in Tropical rainforests.

- ❖ **They have many fruits which climbing animals feed on.**
- ❖ **There are many trees which provide a natural habitat to climbing animals.**

b) Savannah Vegetation

- ❖ **Grass eating animals (herbivorous animals) are common in this region.**
- ❖ **Flesh eating animals (carnivorous animals) also live in savannah vegetation in order to feed on herbivorous animals.**

Why most animals live in Savannah vegetation zone.

- ❖ **There is plenty of pasture for animals.**
- ❖ **Carnivorous animals live in savannah to hunt other animals.**

Common animals in Savannah vegetation.

- **Zebras**
- **Leopards**
- **Lions**
- **Warthogs**
- **Hyenas**
- **Buffaloes**
- **Antelopes**
- **Kobs**

c) Swamp Vegetation

- ❖ **Animals that live both in water and on land are common in swamp vegetation.**

Common animals in swamp vegetation

- **Crocodiles**
- **Hippopotamuses/Hippopotami**
- **Frogs**
- **Snakes**
- **Tortoises**

d) Semi-Desert Vegetation.

- ❖ **There are few animals in semi-desert vegetation due to limited grass and water for animals.**
- ❖ **Burrowing animals are common in this zone.**

Common animals in Desert vegetation.

- Squirrels
- Ostriches
- Camels
- Newts

e) **Mountain Vegetation**

- ❖ It has many animals with a lot of fur.
- ❖ It has many climbing animals that feed on fruits.
- ❖ It has many gorillas that feed on bamboo shoots.

Common animals in montane vegetation.

- Mountain gorillas
- Chimpanzees
- Monkeys
- Baboons

PLACES FOR WILDLIFE CONSERVATION.

- National parks
- Game reserves
- Zoos
- Marine parks
- Sanctuaries

NATIONAL PARKS IN UGANDA.

- A Game park is a large area of land gazetted by the government for wildlife conservation.
- Wildlife refers to animals, birds, plants and insects that live on their own in the natural habitat.

Major national parks in uganda.

- ❖ Murchision falls national park.
- ❖ Lake Mburo national park.
- ❖ Kidepo valley national park
- ❖ Mgahinga national park.
- ❖ Mountain Rwenzori national park.
- ❖ Mountain Elgon national park.
- ❖ Bwindi impenetrable national park.

- A Game reserve is a large area of land gazetted by the government for future expansion of game parks.
- Controlled hunting can be allowed in a game reserve after seeking permission.

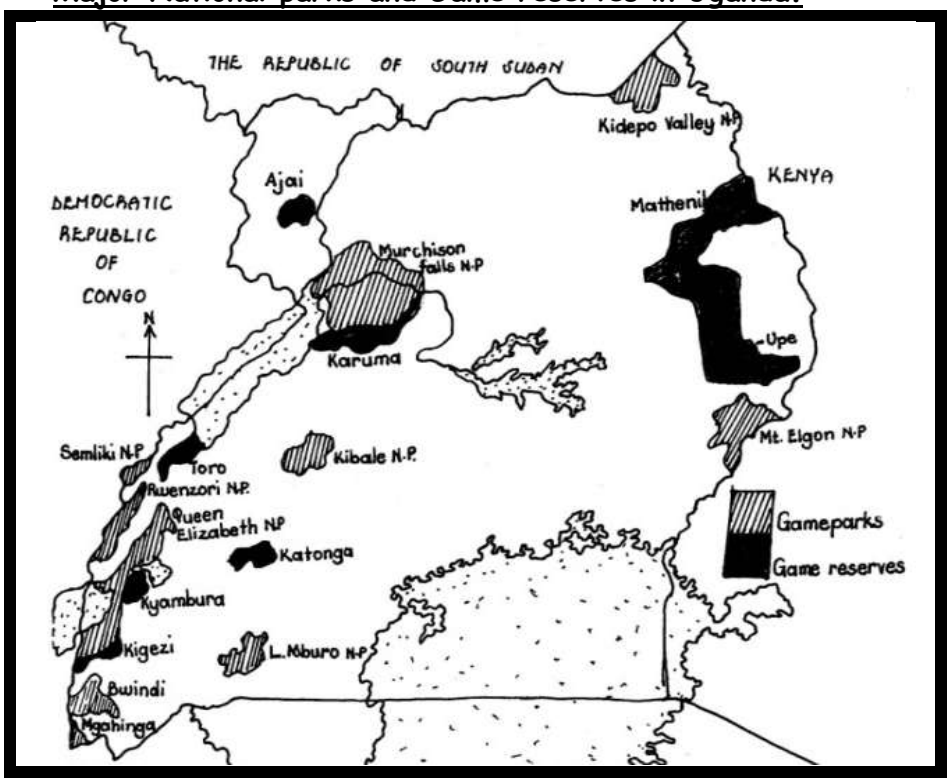
Examples of game reserves in Uganda.

- ❖ Pian-upe game reserve.
- ❖ Bokora game reserve
- ❖ Ajai game reserve
- ❖ Kigezi game reserve
- ❖ Matheniko game reserve
- ❖ Karuma game reserve
- ❖ Katonga game reserve

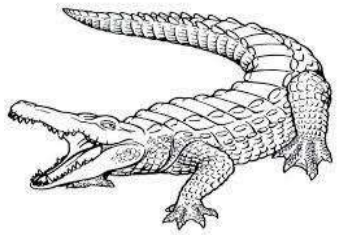
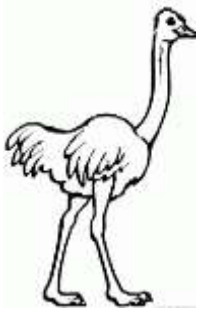
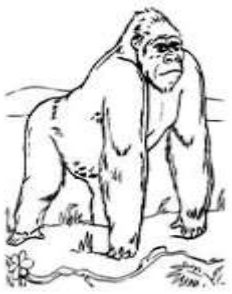
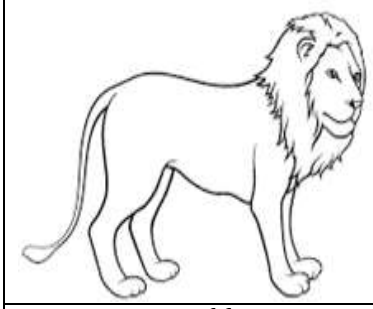
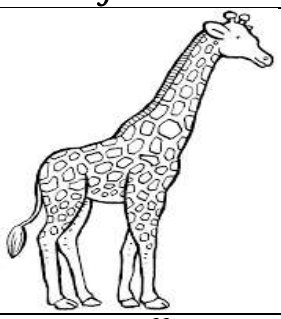
Major tourist attractions in selected Uganda's national parks.

National park	*Major tourist attraction*	*Area (in km²)*	*Type*
Murchison falls national park	Crocodiles / Murchison falls	3,840	Savannah
Kidepo valley national park	Ostriches	1,442	Savannah
Queen Elizabeth national park	Hippopotamuses	1,978	Savannah
Lake Mburo national park	Flamingo birds/ Zebras	370	Savannah
Bwindi national park	Mountain gorillas	321	Forest
Mgahinga national park		33.7	Forest
Rwenzori national park		996	Forest
Mountain Elgon national park		1,121	Forest
Semliki national park		220	Forest
Kibale national park		795	Forest

Major National parks and Game reserves in Uganda.



Major tourist attractions in Uganda's national parks.

			
Lion	*Hippopotamus*	*Ostrich*	*Gorilla*
			
Crocodile	*Flamingo birds*	*Zebra*	*Giraffe*

Importance of national parks.

- **They create job opportunities to people.eg.The game rangers**
- **They earn income through attracting tourists.**
- **They promote the development of infrastructure e.g. Hotels, roads.**
- **They are used for education and scientific research.**
- **They help to preserve wildlife for the future generation to see.**
- **They promote international relationships.**

Activities that commonly take place in Uganda's national parks.

- Animal tracking
- Mountain climbing
- Game drives
- Boat rides
- Nature walks
- Bird watching

Prohibited/ unauthorised activities in national parks.

- Animal grazing
- Crop cultivation
- Hunting
- Human settlement.

Problems facing national parks in Uganda.

a) **Poaching**

- **Poaching** is the illegal hunting of animals in national parks.
  - ✓ It leads to extinction of animal species in national parks.
  - ✓ Poaching reduces the number of animals in national parks.

Why people carry out poaching.

- To get meat.
- To get horns and ivory from them.
- To get hides and skins.

b) **Prolonged drought**

- It dries pasture on which animals feed.
- It also destroys the natural habitat for animals.

c) **Bush fires.**

- They destroy habitats for animals.
- They destroy pasture for animals.
- They lead to death of animals.
- They lead to displacement of wild animals.

d) **Outbreak of animal diseases.**

- Diseases lead to death of animals in national parks.

e) **Human encroachment on national parks.**

- It leads to displacement of wild animals.

f) **Political instability in some parts of Uganda.**

- It leads to death of animals in national parks.
- It leads to displacement of wild animals.
- It leads to destruction of the natural habitat for animals.

Possible solutions to the problems facing national parks in Uganda.

- By enforcing laws against poaching.
- By sensitising people about the importance of wild animals
- By improving on security in areas near national parks.
- By extending veterinary services in game parks.
- By enforcing laws against human encroachment on national parks.

Ways of caring for animals.

- By protecting them.
- By feeding them on nutritious feeds.
- By treating sick animals.
- By treating sick animals.

Note: -*Game wardens protect wildlife in national parks, and also control fire from destroying plants and animals.*

Importance of caring for animals.

- ❖ It promotes tourism.
- ❖ It promotes education and research.
- ❖ It reduces death of animals.

TOURISM INDUSTRY IN UGANDA.

- **Tourism** is the movement of people to places of interest for pleasure, enjoyment or study purpose.
- ***A tourist*** is a person who travels to places of interest for pleasure, enjoyment and study purposes.

Tourism is called an industry because;

- It generates income.
- It creates job opportunities to people.

- Tourism is called *an invisible trade* because it generates income without exchanging physical goods.
- Tourism is called *an invisible export* because it generates foreign exchange without exporting physical goods.

Types of tourists.

- Local tourists
- Foreign tourists.

- **Local tourists** move from one part of the country to another for tourism while **foreign tourists** move from one country to another for tourism.

Major tourist attractions in Uganda.

- Wildlife
- Vegetation
- Culture
- Historical sites
- Beautiful beaches
- Physical features
- Climate

Importance of the Tourism industry.

- ❖ It creates job opportunities to people.
- ❖ It promotes the development of infrastructure like roads, lodges, hotels.
- ❖ It promotes international relationship.
- ❖ It creates market for locally manufactured goods.
- ❖ It is a source of revenue to the government.
- ❖ It promotes conservation of wildlife.

Problems facing the Tourism industry in Uganda.

- ❖ Political instability in some parts of Uganda.
- ❖ Poor transport and communication network.
- ❖ Poor accommodation facilities.
- ❖ Shortage of funds to promote the tourism industry.
- ❖ Limited tourist attractions in some parts of Uganda.
- ❖ Limited advertisement of tourist attractions on international media.

Possible solutions to the problems facing Uganda's Tourism industry.

- ❖ By improving on security in all parts of Uganda.
- ❖ By enforcing laws against poaching.
- ❖ By constructing better roads in all parts of Uganda.
- ❖ By advertising Uganda's tourist attractions on international media.
- ❖ By importing new species of wildlife in Uganda.

- By training more game wardens.
- By building better accommodation facilities in Uganda.
- By gazetting more wildlife conservation areas.

Dangers of Tourism.

- Some tourists come as spies.
- Tourism can bring about spread of diseases in the country.
- Tourism can bring about change of culture.
- Some tourists teach people anti-social behaviours.

General importance of vegetation.

- It is a source of food to people and animals.
- It is a source of herbal medicine.
- It acts as a natural habitat for animals.
- It helps in formation of rain.ie. Convectional rainfall through transpiration.
- It is a source of building materials eg.spear grass.
- It controls soil erosion.
- It is a source of income through attracting tourists.
- It is a source of raw materials for crafts industry.eg.papyrus reeds, palmleaves.
- It is a source of wood fuel ie.charcoal and firewood.
- It purifies air by absorbing carbondioxide and releasing oxygen to the atmosphere.

Dangers of some vegetation.

- Some vegetation is poisonous to people and animals.
- It creates breeding places for disease vectors.
- It harbours dangerous animals to man.
- It creates hiding places for wrong doers.

Effects of population / people on vegetation.

- People clear vegetation to get land for settlement.
- People clear vegetation to construct industries.
- People cut down trees in order to get wood fuel.
- People clear vegetation to construct roads.

VEGETATION CONSERVATION.

- This is the protection of plant life from being destroyed.
- It is the act caring for and protecting plants in the environment.

Human activities which destroy vegetation in an area.

- Deforestation
- Swamp drainage.
- Brick making
- Bush burning
- Over cultivation.
- Over grazing

Ways how man destroys vegetation in an area.

- Through bush burning
- Through deforestation.
- Through swamp drainage.
- Through uncontrolled wetland harvesting.
- Through overgrazing.
- Through overcultivation.

Note: *-Deforestation and bush burning leave the land bare exposing it to agents of soil erosion.*

Ways of conserving vegetation.

- By afforestation.
- By reafforestation.
- By agro-forestry.
- By establishing game parks and game reserves.
- By establishing forest reserves.
- Through rural electrification.
- By using energy saving cooking stoves.
- By enforcing laws against deforestation.
- By teaching people about the importance of vegetation.
- Through rotational grazing.
- Through controlled harvesting of plants in the environment.

Ways of caring for vegetation in the environment.

- By watering plants during the dry season.
- By adding manure to the soil.
- By weeding the crops.
- By thinning vegetation.
- By pruning plants.
- Through rotational grazing.

Bodies that promote conservation of vegetation in Uganda.

✓ National Environment Management Authority (NEMA)
This conserves and protects wetlands/environment in Uganda.
NEMA is under the *Ministry of Water and Environment.*

✓ National Forestry Authority (NFA)
This conserves forests in Uganda.

✓ Uganda Wildlife Authority (UWA)
This conserves wildlife in national parks in Uganda.

How NEMA conserves the environment/ roles of NEMA.

- It teaches people about the importance of forests and swamps.
- It creates forest reserves.
- It enforces laws against wetland degradation.
- It evicts people settling in wetlands.

Importance of conserving vegetation.

- It reduces soil erosion.
- It conserves the natural beauty of the environment.
- It promotes constant supply of wood fuel.
- It conserves the natural habitat for animals.
- It promotes tourism.
- It promotes constant supply of craft raw materials.
- It controls drought.

RELATIONSHIP BETWEEN VEGETATION AND POPULATION DISTRIBUTION.

- Population is the number of people living in an area at a given time.
- Population distribution is the way people are spread in an area.
- Some vegetation zones have sparse population while others have dense population.

Population distribution per vegetation zone.

Vegetation zone	*Population distribution*	*Reason for population distribution*
• Equatorial rain forests	• They are sparsely populated.	❖ Presence of disease vectors. ❖ Poor transport . ❖ Presence of many thick forests. ❖ Presence of many wild animals. ❖ Presence of soggy soils due to heavy rainfall.
• Semi-desert vegetation	• They are sparsely populated.	❖ They are hot and dry throughout the year. ❖ They receive very little rainfall.
• Savannah vegetation zone	• It is densely populated.	❖ The areas receives reliable rainfall for crop growing. ❖ Presence of fertile soils which support cultivation. ❖ It is not greatly affected by disease vectors. ❖ They have plenty of pasture for animals.
• Mountain vegetation	• Slopes of mountains are densely populated.	❖ Presence of fertile soils. ❖ They receive reliable rainfall which favours crop growing.
	• The tops of mountains have very few people.	❖ They experience very cold climate. ❖ Some have rocks and snow.
Swamp vegetation	• It is sparsely populated.	❖ Swampy have dangerous aquatic animals. ❖ Swamps are greatly affected by floods. ❖ There are many disease vectors in swampy areas.

Testing Exercise.

1. Give the meaning of the term Vegetation.
2. Mention any two examples of each of the following types of vegetation
   (i) Natural vegetation.
   (ii) Planted vegetation.
3. State any two characteristics of planted forests.
4. Mention any three tree species that are common in planted forests.
5. Which type of wood is mostly obtained from planted forests?
6. Give one reason why people plant flowers in their compounds.
7. Mention the four vegetation zones of Uganda.
8. Why are tropical rain forests called the rain forests?
9. Name the largest natural forest in Uganda.
10. Which natural forest is found along Kampala-Jinja highway?
11. State any three characteristics of natural forests.
12. Mention any three tree species that commonly grow in natural forests.
13. What are Deciduous trees?
14. Why do some trees shed their leaves during the dry season?
15. How do herbalists benefit from the natural forests in their locality?
16. Give any two ways forests are useful to wild animals.
17. State any two problems facing forests.

18. State any two ways the activity of deforestation is dangerous to the environment.
19. Write the following in full.

(i) NFA
(ii) NEMA
(iii) UWA

20. Give any two ways NFA conserves forests in Uganda.
21. State any two characteristics of semi-desert vegetation.
22. Name any two districts in uganda that have Semi-desert vegetation.
23. State any two characteristics of montane vegetation.
24. Which type of natural vegetation covers the largest part of Uganda?
25. Why are most game parks in Uganda located in Savannah grasslands?
26. Mention any two economic activities that are commonly done in Savannah grasslands.
27. Give any two reasons why people drain swamps.
28. State any two problems that are commonly faced by people living in swampy areas.
29. Mention any four factors that influence vegetation distribution in Uganda.
30. What is a Game park?
31. Name the largest game park in Uganda.
32. Which game park in Uganda would you advise a foreign tourist who wants to see mountain gorillas to visit?
33. Give any two ways game parks promote the development of a country.
34. Mention any any two man's activities that are prohibited in national parks.
35. State any three problems facing game parks in Uganda.
36. Why is tourism called an Industry?
37. Mention any three major tourist attractions in Uganda.
38. State any two problems facing the tourism industry in Uganda.
39. Name the major tourist attraction found in Queen Elizabeth national park.
40. How do hotels promote tourism in a country?
41. Name the body that is responsible for conservation of the environment in Uganda.
42. How is poaching a threat to the tourism industry?
43. Mention any two human activities that destroy vegetation in an area.
44. How does deforestation lead to soil erosion?
45. Give any two ways the tourism industry in Uganda can be improved.

TOPIC 5: NATURAL RESOURCES IN UGANDA.

INTRODUCTION TO RESOURCES IN UGANDA.

- A Resource is any component of the environment that can be used to satisfy man's needs.
- Resources are classified into natural resources and man-made resources

Examples of resources.

- Land
- Wind/ air
- Water
- Minerals
- People
- Cars
- Sunshine
- Animals
- Computers
- Telephones.
- Buildings

- Natural resources are things in the environment that exist on their own and can be used to satisfy man's needs.

Types of natural resources.

- Renewable resources.
- Non-renewable resources.

(i) Renewable resources are things which are used to satisfy man's needs that cannot get exhausted when used.

- These resources cannot get used up whenever people use them.
- Renewable resources can be replaced naturally after use.
- Renewable resources are also referred to as inexhaustible resources.

Examples of renewable resources.

- Land
- Plants/ vegetation
- Wind
- Sunshine
- Water
- People
- Animals

(ii) Non-renewable resources are things which are used to satisfy man's needs that can get exhausted when used.

- These resources can get used up when people use them.
- Non-renewable resources cannot be replaced naturally after use.
- Non-renewable resources are also referred to as exhaustible resources.

Examples of non-renewable resources.

- Fossil fuels
- Minerals eg.petroleum, sand, gold etc.

Note:-***Man made resources*** *are things made by man and are used to satisfy man's needs.eg cars, aeroplanes, telephones, computers, trains etc.*

LAND AS A RESOURCE.

- Land is the surface of the earth's surface that is not covered by water.
- Land is the most important resource because;
  - Most resources are found on land. eg.plants, animals, minerals etc.
  - Most economic activities are carried out on land.

Uses of land.

- Land is used for crop growing.
- Land is used for construction of houses, markets, roads, factories etc.

- Land is used for grazing animals.
- Land is used as a mining ground.
- Land is sold to get money.

LAND DEGREDATION.

- **Land degredation** is the misuse of land lowering its quality and productivity.

Ways people degrade land.

- Through deforestation.
- Through dumping wastes on land.
- Through over grazing.
- Through brick making.
- Through bush burning.

Land conservation.

This is the protection of land from being destroyed.

Ways of conserving land.

- Through afforestation / planting trees.
- Through bush fallowing.
- Proper disposal of waste materials.
- Through contour ploughing.
- By terracing.
- By applying fertilizers.
- Through agro-forestry.

WATER RESOURCES.

- These are important things got from water sources.

Sources of water resources include;

- Rivers
- Lakes
- Streams
- Swamps
- Ponds

Importance of water sources.

- They promote fishing.
- They are a source of raw materials for industries.
- They promote tourism.
- They are used as a medium of water transport.
- They create job opportunities to people.
- Rivers help in generation of hydro electricity.

How man misuses water sources.

- Through dumping garbage in water sources.
- Through over fishing.
- Through over use of water from water sources.
- By bathing in water sources.
- By defecating in water bodies.
- By urinating in water sources.

Dangers of water pollution.

- It leads to death of fish in water bodies.
- It leads to outbreak o water borne diseases.
- It reduces the depth of water bodies.

Ways of conserving water sources.

- By fencing wells.
- By planting trees near water sources.
- By using better fishing methods.
- By dredging wells.

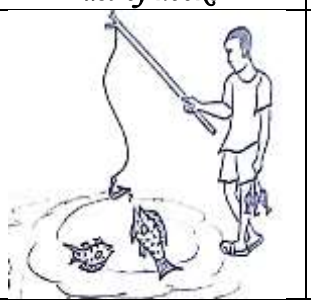
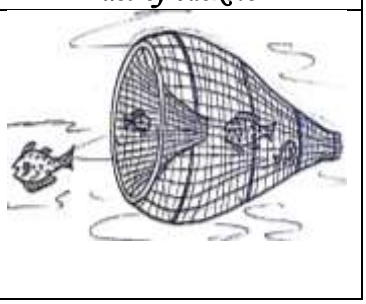
FISHING IN UGANDA.

- Fishing is the extraction of fish from water bodies.
- Fishing in Uganda is carried out in rivers, lakes, ponds and streams.
- Lake Victoria is the largest inland fishing ground in Uganda..
- Nile perch is the largest fish species caught in Uganda while Tilapia is the commonest type caught.

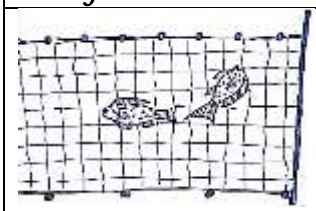
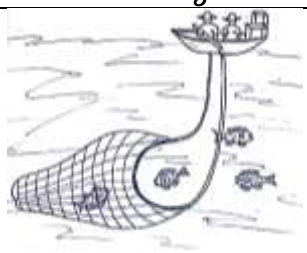
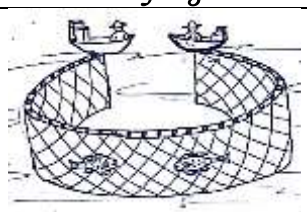
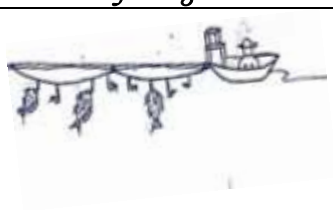
  Other fish species caught in Uganda.

  - ❖ Mud fish (mostly got from swamps)
  - ❖ Lung fish
  - ❖ Cat fish
  - ❖ Sprat fish
  - ❖ Sardine fish
  - ❖ Eel fish
- Fish caught in Uganda is sold locally to the consumers while some is exported to other countries.
- Traditional fishing methods used in Uganda include;

Use of baskets, hooks, spears and using bows and arrows.

use of spears	*use of hooks*	*use of bows and arrows*	*use of baskets*
			

- Modern methods of fishing such as, gill net method, trawling, line fishing method and drifting are also used.

Gill net method	*Trawling*	*Drifting*	*Line fishing method*
			

- Fish is preserved locally by smoking it, sun drying it and salting it.
- Refrigeration and tanning/canning are the commonly used modern methods of fish preservation in Uganda.

Importance of the fishing industry.

- ❖ It is a source of employment opportunities to people.
- ❖ Exported fish earns foreign exchange to the government.
- ❖ It is a source of food to people.
- ❖ Fish is used as a raw material in fish processing industries.
- ❖ Fish is a source of income when sold.
- ❖ Fish is used for making drugs e.g. Cod liver oil.
- ❖ It promotes the development of ports and landing sites.

Problems facing the Fishing industry in Uganda.

- ❖ Indiscriminate fishing (catching of young fish) which leads to extinction of fish species. The use of undersized fishing nets leads to catching of young fish.
- ❖ Water pollution which kills fish.
- ❖ Presence of water hyacinth.
- ❖ Limited capital.
- ❖ Poor fishing methods eg use of poison.
- ❖ Poor storage facilities.
- ❖ Presence of fish predators like crocodiles.
- ❖ Fluctuation/changes of fish prices.
- ❖ Cultural beliefs which discourage some people from eating fish.
- ❖ Limited local market for fish. This is due to high levels of poverty among the people.

Dangers of water hyacinth.

- ❖ It suffocates fish.
- ❖ It breaks fishing nets.
- ❖ It hinders water transport.
- ❖ It harbours some disease vectors.
- ❖ It blocks fishing grounds.

Ways of controlling water hyacinth.

- ❖ By spraying it with chemicals.
- ❖ By using manual methods to remove it.
- ❖ By using machines to remove it.
- ❖ By introducing beetles to feed on it.

Possible solutions to the problems facing the Fishing industry.

- ❖ By protecting fishing grounds from pollution.
- ❖ By encouraging foreign investors in Uganda.
- ❖ By enforcing laws against over fishing.
- ❖ By teaching fishermen the dangers of using poor fishing methods.
- ❖ By encouraging people to practice fish farming.
- ❖ The government should provide fishermen with loans to invest in the fishing industry.

MINERALS AS RESOURCES.

- **Mining** is the extraction of minerals from the earth's crust.
- **A mineral** is a valuable substance found on or below the earth's surface.
- **A mineral deposit** is a place where a particular mineral exists naturally in large amount.
- **A mineral ore** is a rock that contains the mineral.

Types of minerals.

- Metallic minerals e.g. copper, iron ore, lead, zinc.
- Non-metallic minerals e.g. Limestone, phosphates, diamonds.
- Fuel minerals e.g. Coal, crude oil, uranium.

Types of mining.

- Traditional mining
- Modern mining.

Methods of mining.

- Open cast mining e.g. salt, soda ash, limestone, gold.
- Underground mining e.g. copper, cobalt
- Drilling method e.g. crude oil
- Quarrying method e.g. stones, sand.

Importance of some particular minerals.

Mineral	*Importance*	*Area(s) where it exist(s)*
Copper	❖ **For making electric wires and copper coins, gun bullets.**	• **Kilembe in Kasese**
Diamonds	❖ **For making jewellery, drilling machines and equipment used for cutting glasses.**	• **Hoima** • **Kamwenge**
Gold	❖ **For making ornaments, jewellery, trophies, medals.**	• **Kotido in Karamoja.** • **Mubende**
Limestone.	❖ **For making cement, for making lime.**	• **Hima in Kasese** • **Osukuru hills in Tororo**
Salt	❖ **For preserving food and human consumption.**	• **Lake Katwe**
Petroleum/ Crude oil	❖ **For making fuels e.g. petrol, diesel, oil, paraffin.**	• **Shores of lake Albert (Albertine region)**
Phosphates	❖ **For making artificial fertilizers.**	• **In Tororo**
Graphite	❖ **For making pencil leads.**	• **Kitgum in Acholi**

Other minrals mined in Uganda.

- ❖ **Soda ash**
- ❖ **Iron ore**
- ❖ **Tin**
- ❖ **Wolfram**
- ❖ **Asbestos**
- ❖ **Graphite.**
- ❖ **Gypsum**
- ❖ **Cobalt etc**

Note:

- ✓ ***Crude oil*** *was discovered in the Albertine region around the shores of lake Albert.*
- ✓ *An oil refinery is planned in* ***Kaiso-Tonya*** *in Hoima district. Oil will be transported to the coast by the planned* ***Hoima-Tanga crude oil pipeline****.*
- ✓ ***An oil refinery*** *is a place where crude oil is processed.*
- ✓ *In East Africa, oil is refined at Mombasa and Dar-es-salaam.*

Examples of oil wells in the Albertine region.

- *Kingfisher oil well on the shores of lake Albert.*
- *Ngege, Kigogole and Kasememe oil wells in Buliisa.*
- *Mputa, Nzizi and Ngasa oil wells in Kaiso-Tonya, Hoima.*
- *Jobi and Lyec oil wells in Nwoya district.*

How Ugandans will benefit from oil mining in the Albertine region.

- ➢ *Oil mining will create job opportunities to people.*
- ➢ *It will promote the development of roads.*
- ➢ *Ugandans will get oil products at a relatively cheaper cost.*
- ➢ *It will lead to development of towns.*
- ➢ *It will promote the development of roads in the region.*

Contributions of the Mining industry to Uganda's development.

- ❖ **It is a source of foreign exchange to the government.**
- ❖ **It is a source of employment opportunities to people.**
- ❖ **It has promoted the development of roads and railway lines.**
- ❖ **It leads to urbanisation.**
- ❖ **It is a source of raw materials for industries.**

Problems facing Uganda's Mining industry.

- ❖ **Shortage of capital.**
- ❖ **Low levels of technology.**
- ❖ **Shortage of skilled labour force.**

- ❖ Unreliable power supply.
- ❖ Mineral exhaustion in some areas.
- ❖ Competition from other sectors e.g. agriculture, fishing etc
- ❖ Poor transport network in different parts of Uganda.

Possible solutions to the problems facing the Mining industry in Uganda.

- ❖ By constructing better roads to the mining sites.
- ❖ By training more miners.
- ❖ The government should invest more money in the mining industry.
- ❖ By borrowing money from international institutions to invest in the mining industry.
- ❖ By giving tax benefits to foreign investors who invest in the mining industry.

Dangers caused by mining.

- ❖ It leads to pollution of the environment.
- ❖ It leads to displacement of people and animals.
- ❖ It leads to land degradation.
- ❖ It promotes soil erosion.
- ❖ It promotes devegetation.

ANIMAL RESOURCES.

Types of animals.

- Wild animals.
- Domestic animals.

(i) Domestic animals are animals kept at home.

Examples are;- rabbits, sheep, cattle, dogs, goats, camels, donkeys etc.

Importance of keeping domestic animals.

- ❖ They provide milk eg.cattle, camels, goats
- ❖ Some provide meat eg. Goats, camels, cattle.
- ❖ Some domestic animals provide security/ guard our homes eg.dogs.
- ❖ Some are used for ploughing our gardens eg.oxen
- ❖ Some are used for carrying goods eg.donkeys, camels,horses.
- ❖ Some provide hides and skins.
- ❖ Some domestic animals are used as pets at home.
- ❖ They are a source of income when sold.
- ❖ Some are used for paying brideprice eg cattle, goats.

Note: -***Pack animals*** *are animals which are used for transport.*

		
a camel	*a donkey*	*a horse*

(ii) Wild animals are animals that live on their own in their natural habitat.

Examples are;- snake, lion, zebra, elephant,kob, tiger etc.

Importance of wild animals.

- ❖ Some wild animals provide meat.
- ❖ Some wild animals provide hooves.
- ❖ Some wild animals provide materials used to make crafts.

- They are used for scientific research
- Some wild animals are used for cultural purposes.
- Wild animals attract tourists who bring in income.
- Some wild animals provide skins and hides.

Dangers of animals.

- They destroy farmers' crops.
- Wild animals like lions, tigers can attack and kill people.
- Some animals spread diseases to man.
- Some animals pollute water sources.

How people mistreat animals.

- By denying them food.
- By overloading pack animals.
- Through bestiality
- By denying them water.
- Through poaching.

Ways of caring for animals.

- By feeding animals.
- By treating sick animals.
- By giving them shelter.
- By cleaning their homes.

CLIMATE AS A RESOURCE.

WIND AS A RESOURCE.

- Wind is air in motion/ moving air.

Importance of wind.

- Wind helps in rain formation.
- Wind helps farmers in winnowing seeds.
- Winds helps in driving some boats.
- Wind can be turned into power by wind mills. Wind mills are mainly used in Karamoja to pump water and mill grains.
- Wind helps in flying kites and balloons.
- Wind helps our clothes to dry faster.
- Winds helps in pollution.
- Wind drives away bad smell.

Dangers of wind.

- Strong wind can blow off roofs of our houses.
- Wind causes soil erosion.
- Strong wind may force boats to capsize on lakes and rivers.
- Wind pollutes the atmosphere by raising dust.
- Wind drives away clouds that would bring rainfall.

RAINFALL AS A RESOURCE.

- Rain is the main source of water in the environment.

Types of rainfall.

- Convectional rainfall (received mostly around forests and large water bodies)
- Cyclonic rainfall/ Frontal rainfall (received mostly in plateau areas)
- Relief/Orographic rainfall (received mostly in highland areas)

Importance of rainfall.

- ❖ Rainfall provides water for domestic use.
- ❖ Rainfall helps plants to grow well.
- ❖ Rainfall reduces dust in the environment.
- ❖ Rainfall increases water volume in water bodies.
- ❖ Rainfall cools the environment.
- ❖ Rainfall softens the soil for easy cultivation.

Dangers of much rainfall.

- ❖ Much rainfall causes floods.
- ❖ Heavy rainfall causes landslides.
- ❖ It leads to soil erosion.
- ❖ It makes murram roads muddy and slippery.
- ❖ Heavy rainfall leads to destruction of property.
- ❖ Heavy rainfall destroys farmers' crops.

SUNSHINE AS A RESOURCE

- The sun is the main natural source of light in the environment.
- Uganda has receives abundant sunshine throughout the year.
- This sunshine is tapped and utilized by many people in Uganda in form of solar energy.

Importance of sunshine.

- ❖ It dries harvested crops.
- ❖ It provides light.
- ❖ It is a source of Vitamin D.
- ❖ It dries our clothes.
- ❖ It helps in generation of solar energy.

Solar energy projects in Uganda.

- Kabulasoke solar plant in Gomba.
- Soroti solar plant at Opuyo-Soroti.
- Tororo solar plant

Dangers of sunshine.

- ❖ Strong sunshine leads to drought.
- ❖ It dries up water bodies.
- ❖ It dries pasture for animals.
- ❖ It causes high temperatures in the environment.
- ❖ It causes dust in the envioronment.
- ❖ It dries crops in the garden before they are ready for harvesting.

HUMAN RESOURCE (MAN AS A RESOURCE)

Human resource refers to people who are important/ useful to others.

Types of humal labour.

Skilled labour.

- This refers to trained workers who provide labour to others.

Forexample;

- ❖ Teachers
- ❖ Bankers
- ❖ Pilots
- ❖ Doctors
- ❖ Nurses
- ❖ Tailors
- ❖ Engineers
- ❖ Mechanics

Unskilled labour

- **This refers to untrained workers who provide labour to other people.**

Forexample,

- **Hawkers**
- **Potters**
- **Market vendors**

Importance of people as a resource.

- **People provide services to other people eg.teachers, doctors etc**
- **People help in management of other resources.**
- **People provide market for goods and services.**
- **People provide labour on farms.**
- **People pay taxes to the government.**

Problems facing man as a resource.

- **Poor payment/ low salaries.**
- **Poor transport network.**
- **Poverty**
- **Accidents**
- **Illiteracy**
- **Bad weather**
- **Diseases**
- **Political instability.**

Ways of improving human resource.

- **By providing training to workers.**
- **By paying attractive salaries to workers.**
- **By building better health cenres in the country.**
- **By encouraging people to go to school to acquire skills.**
- **By building better transport routes in the country.**

Problems affecting utilisation of natural resources in Uganda.

- **Limited capital.**
- **Low levels of technology.**
- **Shortage of skilled labourforce.**
- **Insecurity in some parts of the country.**
- **Poor transport and communication.**
- **Some natural resources exist in scattered places.**

Ways people misuse natural resources.

- **Through over bush burning.**
- **Through over fishing.**
- **Through over grazing.**
- **Through over cultivation.**
- **Through swamp drainage.**
- **Through dumping wastes in water bodies.**
- **Through uncontrolled harvesting of swamp resources.**

Ways of protecting natural resources.

- **By encouraging people to plant more trees.**
- **By teaching farmers better farming methods.**
- **By teaching people the dangers of misusing the environment.**
- **By enforcing laws againt wastage of resources.**
- **By encouraging people to use other sources of energy.**

Testing Exercise.

1. Give the meaning of each of the following;
(i) A resource
(ii) Natural resources
2. Mention the two types of natural resources.
3. What are Non-renewable resources?
4. Mention any four examples of renewable resources in the environment.
5. Why is land regarded as the most important resource?
6. Mention any three examples of man-made resources in the environment.
7. Give any three ways people use land in your community.
8. Give any two wys people degrade land in the environment.
9. Which type of electricity is generated from fast flowing water?
10. State any two ways people misuse water bodies in their community.
11. Give any two ways one can care for a water source in his/ her community.
12. Name the largest fish species caught in Uganda's water bodies.
13. Mention any two modern fishing methods.
14. Give any three ways the fishing industry is important.
15. State any two problems facing the fishing industry in Uganda.
16. Give any two ways the water hyacinth affects the fishing industry in Uganda.
17. Give any two ways the fishing industry can be improved.
18. Mention any two types of minerals.
19. Mention any two methods of mining used in Uganda.
20. Which major mineral is mined from the Osukuru hills in Tororo district?
21. Mention the mineral that is used for making electric wires and coins?
22. Which mineral was discovered on the shores of lake Albert recently?
23. Name the mineral that is mainly used for making artificial fertilizers.
24. Mention any three oil wells found in the Albertine region.
25. Give any three ways Ugandans will benefit from the extraction of crude oil in the Albertine region.
26. State any two problems facing the mining industry in Uganda.
27. Give any two ways mining has promoted development in Uganda.
28. State any two economic values of keeping animals.
29. Give one way people can serve as resources.
30. Give any two ways wind promotes farming activities inan area.
31. State any two dangers caused by strong wind in the environment.
32. Mention the three types of rainfall.
33. How is the sun useful in the rain cycle?
34. Give any two ways sunshine acts as a resource.
35. State any two factors hindering effective resource utilisation in Uganda.